33 CFR 158.410 Reception Facilities: General

15. One comment recommended that the Coast Guard require the posting of signs to locate and identify each reception facility.

Responding to comments on the NPRM, the Coast Guard has earlier amended this subpart to require that reception facilities be accessible to mariners: easy for mariners unfamiliar with the port to find, and convenient for them to use. The Coast Guard has not received any comments stating that reception facilities were hard to find or awkward to use. Therefore, the Coast Guard does not believe it necessary to require the posting of such signs.

Regulatory Evaluation

The Coast Guard considers this final rule not to be major under Executive Order 12291 though to be significant under DOT regulatory policies and procedures published on February 26, 1979 [44 FR 11034]. This final rule clarifies, but does not otherwise alter, the interim rule published on April 28, 1989 [54 FR 18384]. The annual projected costs remain around $41.8 million; the annual projected benefits, while harder to quantify, should exceed these. A final Regulatory Evaluation is in the rulemaking docket. The Evaluation is available for inspection and copying at the address indicated in the first paragraph of ADDRESSES above.

Regulatory Flexibility Act

The Coast Guard has analyzed regulatory flexibility to evaluate the impact of this final rule on small entities. It has made its analysis part of the final Regulatory Evaluation in accordance with the Regulatory Flexibility Act. Again, this final rule clarifies, but does not otherwise alter, the interim rule published on April 28, 1989 [54 FR 18384]. Like the interim rule, this final rule will affect around 17,600 small vessels and around 4,400 ports and terminals; but small entities may choose their modes of compliance, and need satisfy only minimal requirements on recordkeeping and reporting. Therefore, the Coast Guard certifies that this final rule will not have a significant economic impact or a substantial number of small entities.

Paperwork Reduction Act

The interim rule changed the information-collection requirement at §§ 151.65 and 158.140. This final rule changes it no further. The Coast Guard, however, did submit to the Office of Management and Budget (OMB) revisions to OMB's previous paperwork approvals. These revisions, now accepted, respectively bear control numbers 2115–0544 and 2115–0543, issued by the Regulatory Information Service Center (RISC) of OMB. Those sections respectively require (a) each master to give a port 24 hours' notice of the need for the APHIS-approved reception facility and (b) each port and terminal that satisfies the criteria of § 158.140 to seek from the Coast Guard a COA for garbage.

Federalism

The Coast Guard has analyzed this final rule in accordance with the principles and criteria in Executive Order 12612. It has determined that the substance of this rule does not implicate federalism enough to warrant its preparation of a Federalism Assessment.

Environmental Impact

A final Environmental Assessment, with a Finding of No Significant Impact, is available from the Coast Guard at the address in the first paragraph of ADDRESSES above.

List of Subjects

33 CFR Part 151

Oil pollution, Reporting and recordkeeping requirements, Water pollution control.

33 CFR Part 155

Oil pollution, Reporting and recordkeeping requirements.

33 CFR Part 158

Administrative practice and procedure, Harbors, Oil pollution, Penalties, Reporting and recordkeeping requirements, Water pollution control.

46 CFR Part 25

Fire prevention, Marine safety.

For the reasons discussed above, the interim rule amending 33 CFR parts 151, 155, and 158, and 46 CFR part 25, which was published on April 28, 1989 [54 FR 18384], is adopted as a final rule with the following changes:

TITLE 33

PART 151—VESSELS CARRYING OIL, NOXIOUS LIQUID SUBSTANCES, GARBAGE, AND MUNICIPAL OR COMMERCIAL WASTE

1. The citation of authority for part 151 continues to read as follows:

Authority: 33 U.S.C. 1321(j)(l)(C) and 1903(b), E.O. 11735, 3 CFR, 1971–1975 COMP p. 793, 49 CFR 1.46.

2. Section 151.05 is amended by adding the following definition:

§ 151.05 Definitions.

* * * * *

Plastic means any garbage that is solid material, that contains as an essential ingredient one or more synthetic organic high polymers, and that is formed or shaped either during the manufacture of the polymer or polymers or during fabrication into a finished product by heat or pressure or both. "Degradable" plastics, which are composed of combinations of degradable starches and are either (a) synthetically produced or (b) naturally produced but harvested and adapted for use, are plastics under this part. Naturally produced plastics such as crabshells and other types of shells, which appear normally in the marine environment, are not plastics under this part.

Note: Plastics possess material properties ranging from hard and brittle to soft and elastic. Plastics are used for a variety of marine applications including, but not limited to: food wrappings, products for personal hygiene, packaging (vaporproof barriers, bottles, containers, and liners), ship construction (fiberglass and laminated structures, siding, piping insulation, flooring, carpets, fabrics, adhesives, and electrical and electronic components), disposable eating-utensils and cups (including styrene products), bags, sheeting, floats, synthetic fishing nets, monofilament fishing line, strapping bands, hardhats, and synthetic ropes and lines.

* * * * *

PART 158—RECEPTION FACILITIES FOR OIL, NOXIOUS LIQUID SUBSTANCES, AND GARBAGE

3. The citation of authority for part 158 continues to read as follows:

Authority: 33 U.S.C. 1903(b); 49 CFR 1.46.

4. Section 158.165(b)(3) is revised to read as follows:

§ 158.165 Certificate of adequacy: change of information.

* * * * *

(b) * * *

(3) Form C, sections A1, B1, B2, or D4.

* * * * *

Dated: June 26, 1990.

J. W. Kime,

Admiral, U.S. Coast Guard Commandant.

[FR Doc. 90–20663 Filed 8–31–90; 8:45 am]

BILLING CODE 4910–14–M

federal register

Tuesday,
September 4, 1990

Part III

Department of Health and Human Services

Health Care Financing Administration

42 CFR Parts 412 and 413

Medicare Program; Changes to the Inpatient Hospital Prospective Payment System and Fiscal Year 1991 Rates; Final Rule

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Parts 412 and 413

[BPD-673-F]

RIN 0938-AE56

Medicare Program; Changes to the Inpatient Hospital Prospective Payment System and Fiscal Year 1991 Rates

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Final rule.

SUMMARY: We are revising the Medicare inpatient hospital prospective payment system to implement necessary changes arising from legislation and our continuing experience with the system. In addition, in the Addendum to this final rule, we are describing changes in the amounts and factors necessary to determine prospective payment rates for Medicare inpatient hospital services. In general, these changes are applicable to discharges occurring on or after October 1, 1990. We also set forth rate-of-increase limits for hospitals and hospital units excluded from the prospective payment system.

This final rule also responds to comments received concerning changes to hospital payments made in an April 20, 1990 final rule with comment. These changes include mid-year changes to the inpatient hospital prospective payment system that implemented provisions of the Omnibus Budget Reconciliation Act of 1989; and adjustments applicable to prospective payment hospitals and to the target amounts of hospitals and units excluded from the prospective payment system due to the elimination of the day limitation on covered inpatient hospital days made by the Medicare Catastrophic Coverage Act of 1988 and later repealed by provisions in the Medicare Catastrophic Repeal Act of 1989. The April 20, 1990 final rule with comment also incorporated changes to these provisions made by the Family Support Act of 1988, which clarified the criteria for adjusting the target amounts and implementation date.

In addition, this final rule clarifies the documentation requirements necessary to support the cost allocation of teaching physicians and the allowability of costs for rotating residents in determining payment for the direct costs of an approved graduate medical education program. This clarification is being made as a result of a September 29, 1989 final rule that made changes in Medicare policy concerning payment for the direct graduate medical education costs of providers associated with approved residency programs in medicine, osteopathy, dentistry, and podiatry.

EFFECTIVE DATE: The provisions of this final rule are effective on October 1, 1990, except for the changes concerning § 412.118, the count of full-time equivalent residents for purposes of the indirect medical education adjustment, which apply to cost reporting periods beginning on or after July 1, 1991.

FOR FURTHER INFORMATION CONTACT: Barbara Wynn, (301) 966-4529.

ADDRESSES: To obtain individual copies of this document, contact the following: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238. The charge for individual copies is $1.50 for each issue or for each group of pages as actually bound, payable by check or money order to the Superintendent of Documents.

SUPPLEMENTARY INFORMATION:

I. Background

A. Summary

Under section 1886(d) of the Social Security Act (the Act), a system of payment for acute inpatient hospital stays under Medicare Part A (Hospital Insurance) based on prospectively-set rates was established effective with hospital cost reporting periods beginning on or after October 1, 1983. Under this system, Medicare payment is made at a predetermined, specific rate for each hospital discharge. All discharges are classified according to a list of diagnosis-related groups (DRGs). The regulations governing the inpatient hospital prospective payment system are located in 42 CFR Part 412.

B. Summary of December 29, 1989 Notice

On September 1, 1989, we published a final rule (54 FR 36452) to implement the seventh year of the prospective payment system. However, on December 19, 1989, the Omnibus Budget Reconciliation Act of 1989 (Pub. L. 101-239) was enacted. The portions of sections 6001, 6002, 6003, 6004, 6021, 6110, and 6205 of Public Law 101-239 that affected Medicare payments to hospitals in Federal fiscal year (FY) 1990 and that were self-implementing, were announced in a **Federal Register** notice published on December 29, 1989 (54 FR 53754). These statutory changes provided for the following:

- For discharges occurring on or after January 1, 1990 and before October 1, 1990, the applicable percentage increase used to update the standardized amounts for prospective payment system hospitals is—
  - —9.72 percent for hospitals located in rural areas;
  - —5.62 percent for hospitals located in large urban areas; and
  - —4.97 percent for hospitals located in other urban areas.

(The increase in the target amount for excluded hospitals and units was not changed and, therefore, continues to be 5.5 percent.)

- Effective for portions of cost reporting periods or discharges occurring during the period beginning January 1, 1990 and ending September 30, 1990, payments for capital-related costs of inpatient services of hospitals under the prospective payment system are reduced by 15 percent.
- For cost reporting periods beginning on or after October 1, 1989, the hospital-specific rate of sole community hospitals is updated by the percentage increase applicable to the geographic area in which the hospital is located. This increase is applicable to discharges occurring on or after January 1, 1990.
- Hospitals that were classified as rural referral centers as of September 30, 1989 continue to be classified as rural referral centers for cost reporting periods beginning on or after October 1, 1989 and before October 1, 1992.
- Hospitals classified as cancer hospitals are excluded from the prospective payment system effective with cost reporting periods beginning on or after October 1, 1989. The reduction for payment of capital costs is eliminated for hospitals classified as cancer hospitals as of December 19, 1989 efffective for portions of cost reporting periods or discharges occurring on or after October 1, 1986. For hospitals classified after December 19, 1989, the reduction for payment of capital costs is eliminated for cost reporting periods beginning on or after the date of classification. Special provisions were also made for hospitals that qualify for cancer status before December 31, 1990 (or before December 31, 1991 for hospitals located in States operating a demonstration project under section 1814(b) of the Act as of December 19, 1989). Effective January 18, 1990, a cancer hospital is eligible to receive periodic interim payments if it meets the criteria for receiving these payments. For cost reporting periods beginning on or after April 1, 1989, the base year for determining target amounts for cancer hospitals is to be the hospital's cost reporting period beginning during FY 1987 unless the use of its initial base

year and intervening updates creates a higher target amount.

• Effective for discharges occurring on or after January 18, 1990, a hospital created by the merger or consolidation of two or more hospitals or hospital campuses eligible to receive interim periodic payments is also eligible to receive periodic interim payments.

C. Summary of April 20, 1990 Final Rule With Comment

On April 20, 1990, we published a final rule with comment (55 FR 15150) to implement those portions of sections 6003, 6011, 6015, and 6205 of Public Law 101–239 that affect Medicare payments to hospitals and that were, in general, effective April 1, 1990. These changes provided for the following:

• For discharges occurring on or after April 1, 1990, hospitals located in rural areas with more than 100 beds, or those that are classified as sole community hospitals, can now qualify for a disproportionate share adjustment if the hospital has a disproportionate patient percentage of at least 30 percent. In addition, the disproportionate share payment adjustments for qualifying hospitals are increased.

• For cost reporting periods beginning on or after April 1, 1990, the payment methodology for sole community hospitals is revised. In addition, the change made in the September 1, 1989 prospective payment system final rule (54 FR 36480) that went into effect on October 1, 1989 to allow any rural hospital to qualify as a sole community hospital if it is more than 35 miles from another hospital is ratified.

• For cost reporting periods beginning on or after April 1, 1990 and ending on or before March 31, 1993, a special payment method under the prospective payment system for Medicare-dependent small rural hospitals is established.

• For discharges occurring on or after April 1, 1990, the wage index applicable to rural counties whose hospitals are deemed urban is revised.

• For dicharges occurring on or after June 19, 1990 and before December 19, 1991, prospective payment hospitals receive an additional payment for the cost of administering blood clotting factors to hemophiliacs who are hospital inpatients.

• For cost reporting periods beginning on or after April 1, 1990, excluded hospitals and units may be assigned a new base period for purposes of the rate-of-increase limits if it would be more representative of the reasonable and necessary costs of inpatient services.

• For cost reporting periods beginning on or after December 19, 1989 and before the later of October 1, 1990 or the date the Secretary issues new regulations concerning payment for nursing and allied health education, the costs incurred by hospitals that meet certain criteria for training nursing students enrolled in a hospital-based nursing school are to be paid on the basis of reasonable cost.

In addition, in the April 20, 1990 final rule with comment, we responded to comments received on the September 30, 1988 prospective payment system final rule with comment (53 FR 38476) with respect to the implementation of two provisions of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360) concerning adjustments to the rates, weights, and outlier thresholds applicable to prospective payment hospitals and the target amounts applicable to hospitals and units excluded from the prospective payment system due to the elimination of the day limitation on covered inpatient hospital days. We also discussed changes in law made by the Family Support Act of 1988 (Pub. L. 100–485), which clarified the criteria for adjusting target amounts and changed the date for implementing that provision, as well as the termination of these catastrophic provisions effective January 1, 1990 because of the enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 (Pub. L. 101–234). The comment period for the April 20, 1990 final rule with comment period ended on June 19, 1990. In section II of the preamble of this final rule, we are responding to the comments received concerning the April 20, 1990 final rule.

D. Summary of the Provisions of the May 9, 1990 Proposed Rule

On May 9, 1990, we published a proposed rule in the **Federal Register** (55 FR 19426) to further amend the prospective payment system as follows:

• We proposed changes for FY 1991 DRG classifications and weighting factors as required by section 1886(d)(4)(C) of the Act. We must adjust the DRG classifications and weighting factors at least annually.

• We proposed to update the wage index by basing it entirely on 1988 wage data.

• We proposed to recompute the hospital market basket, which reflects hospital changes in the purchase of goods and services used to furnish care, using data from a more recent base year (that is, "rebasing" or "reweighting" the market basket) and to revise the market basket to reflect the use of certain newly available price proxies for monitoring the rate of inflation in the market basket. We also proposed to establish a separate market basket for hospitals and units excluded from the prospective payment system.

• We discussed several current provisions of the regulations in 42 CFR part 412 and set forth certain proposed changes concerning—

—Elimination of the regional floor;
—Sole community hospital criteria;
—Cancer hospitals;
—Rural referral center criteria;
—Indirect medical education costs; and
—Offset for physician assistant services.

• In the Addendum to the proposed rule, we set forth changes to the amounts and factors for determining the FY 1991 prospective payment rates. We also proposed new target rate percentages for determining the rate-of-increase limits for cost reporting periods beginning in FY 1991 for hospitals and hospital units excluded from the prospective payment system.

• In appendix A of the proposed rule, we set forth an analysis of the impact that the proposed changes described in the rule would have on affected entities.

• In appendix B of the proposed rule, we provided a technical discussion of the data sources used to estimate the market basket relative weights and the choice of price proxies.

• In appendix C of the proposed rule we included our initial estimate of an update factor for FY 1991 for both prospective payment hospitals and hospitals excluded from the prospective payment system, as required by section 1886(e)(3)(B) of the Act.

• Appendix D of the proposed rule provided our recommendation of the appropriate percentage change for FY 1991, as required by sections 1886 (e)(4) and (e)(5) of the Act, in the—

• Large urban, other urban, and rural average standardized amounts for inpatient hospital services paid for under the prospective payment system; and

• Target rate-of-increase limits to the allowable operating costs of inpatient hospital services furnished by hospitals and hospital units excluded from the prospective payment system.

In addition, the proposed rule discussed in detail the March 1, 1990 recommendations made by the Prospective Payment Assessment Commission (ProPAC). ProPAC is directed by section 1886(d)(4)(D) of the Act to make recommendations to the Secretary with respect to adjustments to the DRG classifications and weighting factors and to report to Congress with respect to its evaluation of any adjustments made by the Secretary.

ProPAC is also directed, by the provisions of sections 1886(e)(2) and (e)(3) of the Act, to make recommendations to the Secretary on the appropriate percentage change factor to be used in updating the average standardized amounts beginning with FY 1986 and thereafter.

We printed ProPAC's report, which includes its recommendations, as Appendix E to the proposed rule (55 FR 19426).

Set forth below in sections III through VI and VIII of this preamble, the Addendum to this final rule, and appendixes A and C are detailed discussions of the contents of the May 9, 1990 proposed rule, the public comments received in response to that proposal, and responses to those comments as well as any changes we will be making.

Also, in section VII of the preamble of this final rule we clarify the documentation requirements necessary to support the cost allocation of teaching physicians and the allowability of costs for rotating residents in determining payment for the direct costs of approved graduate medical education programs. This clarification is being made as a result of the September 29, 1989 final rule that made changes in Medicare policy concerning payment for the direct graduate medical education costs of providers associated with approved residency programs in medicine, osteopathy, dentistry, and podiatry. These changes implemented section 1886(h) of the Act, which was added by section 9202 of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Pub. L. 99-272) and amended by section 9314 of the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99-509).

E. Number and Types of Public Comments

A total of 315 items of correspondence containing comments on the May 9, 1990 proposed rule were received timely. The main areas of concern addressed by commenters were the following:

- The changes in DRG classification and weighting factors and lack of any proposal to increase payment for cochlear implants or inflatable penile implants.
- The proposal to base the wage index on 1988 data only and to mitigate the effects of a large change in a wage index value.
- The changes in the market basket index.
- The revision in the interns and residents counting methodology for determining the indirect medical education adjustment.
- The proposal to offset the charges for services of physician assistants from hospital DRG payments.

II. Discussion of Public Comments Concerning the April 20, 1990 Final Rule With Comment

A number of letters were received timely containing comments on the provisions in Public Law 101-239 included in the April 20, 1990 final rule with comments.

A majority of the commenters raised issues concerning the conditions under which we would approve the assignment of a new base period. Several other commenters raised issues concerning recognition and payment for hospital-based nursing school costs under Medicare. Four commenters had concerns relating to the initial determinations for Medicare payments made to sole community hospitals and Medicare dependent, small rural hospitals. Four comments were received that raised issues concerning disproportionate share adjustments and two commenters questioned the pricing of blood clotting factors for hemophilia. However, in general, most of the commenters believe the regulatory changes contained in the rule were straightforward and reflected the statutory language and Congressional intent.

A. Disproportionate Share Adjustment (§ 412.102)

Section 1886(d)(5)(F) of the Act provides for additional payments to prospective payment hospitals that serve a disproportionate share of low-income patients. Under section 1886(d)(5)(F)(v) of the Act, and under § 412.106(b) of the regulations for discharges occurring prior to April 1, 1990, a hospital qualifies for a disproportionate share adjustment if during the hospital's cost reporting period, the hospital has a disproportionate patient percentage that is at least equal to—

- 15 percent for an urban hospital with 100 or more beds or a rural hospital with 500 or more beds;
- 40 percent for an urban hospital with fewer than 100 beds;
- 45 percent for a rural hospital with fewer than 500 beds.

In addition, a hospital can qualify for a disproportionate share adjustment as defined under § 412.106(c)(2) if the hospital has 100 or more beds, is located in an urban area, and receives more than 30 percent of net inpatient revenues from State and local government sources for the care of indigent patients not eligible for Medicare or Medicaid.

Section 6003(c)(2) of Public Law 101-239 added an additional qualifying methodology under section 1886(d)(F)(5)(v) of the Act for certain rural hospitals beginning with discharges occurring on or after April 1, 1990. That is, if a hospital located in a rural area has more than 100 beds, or is classified as a sole community hospital (SCH), and has a disproportionate patient percentage of at least 30 percent during its cost reporting period, the hospital will qualify for a disproportionate share adjustment.

Sections 1886(d)(5)(F) (iii) and (iv) of the Act define the allowable disproportionate share adjustments that are added to the Federal portion of Medicare prospective payments for those hospitals described in sections 1886(d)(5)(F) (i) and (v) of the Act that meet the disproportionate share qualifications. For discharges occurring prior to April 1, 1990, those adjustments are—

- 2.5 percent plus one-half of the difference between the hospital's disproportionate patient percentage and 15 percent for urban hospitals with 100 or more beds and rural hospitals with 500 or more beds;
- 5 percent for urban hospitals with fewer than 100 beds;
- 4 percent for rural hospitals with fewer than 500 beds; and
- 25 percent for urban hospitals with 100 or more beds receiving more than 30 percent of net inpatient revenues from State and local government sources for the care of indigent patients.

In addition, sections 6003(c) (2) and (3) of Public Law 101-239 amended section 1886(d)(5)(F) of the Act, which concerns the payment methodology for determining disproportionate share payment adjustments effective with discharges occurring on or after April 1, 1990. These changes provided for the following:

- The disproportionate share payment adjustment factor was increased from 25 to 30 percent for a hospital that qualifies for a disproportionate share adjustment under § 412.106(c)(2), that is, the hospital has 100 or more beds, is located in an urban area, and receives more than 30 percent of net inpatient revenues from State and local government sources for the care of indigent patients not eligible for Medicare or Medicaid.
- A hospital located in an urban area and having 100 or more beds, or a hospital located in a rural area and having 500 or more beds, with a disproportionate patient percentage of greater than 20.2 percent receives a disproportionate share adjustment that will increase the DRG revenue by 5.62

percent plus 65 percent of the difference between its disproportionate patient percentage and 20.2 percent. If the hospital's disproportionate patient percentage is less than 20.2 percent, the hospital's DRG revenue is increased by 2.5 percent plus 60 percent of the difference between its disproportionate patient percentage and 15 percent.

• A hospital located in a rural area that is classified as both a rural referral center and an SCH receives a disproportionate share adjustment that increases the Federal portion of the hospital's DRG revenue by the greater of 10 percent, or 4 percent plus 60 percent of the difference between the hospital's disproportionate patient percentage and 30 percent.

• A hospital located in a rural area and classified as a rural referral center receives a disproportionate share adjustment that increases the hospital's DRG revenue by 4 percent plus 60 percent of the difference between its disproportionate patient percentage and 30 percent.

• A hospital located in a rural area and classified as an SCH receives a disproportionate share adjustment that increases the Federal portion of the hospital's DRG revenue by 10 percent.

For a hospital with fewer than 100 beds located in an urban area, the disproportionate share adjustment continues to be 5 percent. For a hospital with fewer than 500 beds located in a rural area, which is not classified as a rural referral center or an SCH, the disproportionate share adjustment continues to be 4 percent.

Comment: One commenter stated that Congressional intent was not adhered to concerning the disproportionate share adjustment for hospitals that are designated either as SCHs or as SCHs and rural referral centers. The April 20, 1990 final rule with comment stated that the corresponding disproportionate share payment percentage would be applied to "the Federal portion of the hospital's DRG revenue." This commenter asserted that the statutory language does not restrict the applicable payment to the Federal portion of the DRG payment and that it should also apply to the hospital-specific portion of an SCH's payment rate.

Response: We do not agree with the commenter's interpretation of the statute. Section 1886(d)(5)(F)(ii) of the Act provides that the amount of any additional payment is determined by multiplying the total amount payable based on the Federal rate provided for in section 1886(d)(1)(A)(iii) of the Act by the disproportionate share adjustment percentage. There is no provision for paying the disproportionate share adjustment on the hospital-specific rate.

For cost reporting periods beginning before April 1, 1990, SCHs are paid a blended rate based on 75 percent of the hospital-specific rate and 25 percent of the Federal regional rate. For cost reporting periods beginning on or after April 1, 1990, as provided in section 1886(d)(5)(D)(i) of the Act, an SCH is paid based on whichever of the following three rates yields the greatest aggregate payment for the cost reporting period:

• The Federal national rate applicable to the hospital.

• The updated hospital-specific rate based on FY 1982 cost per discharge.

• The updated hospital-specific rate based on FY 1987 cost per discharge.

The disproportionate share adjustment only applies to the Federal rate because it is recognized that a federally-based payment may not take the additional costs associated with treating a disproportionate share of low income patients into consideration, since it is based on a national standardized amount. On the other hand, a hospital's hospital-specific rate (HSR) is based on the historical costs of the individual hospital and, therefore, already reflects the additional costs incurred by the hospital for treating a disproportionate share of low income patients. Accordingly, it is appropriate that the disproportionate share adjustment be applied only to the Federal portion of the hospital's DRG revenue. Therefore, SCHs that are still receiving payment based on the blended rate will receive a disproportionate share adjustment only on the 25 percent Federal portion. If an SCH is receiving payment based on the revised payment methodology, the disproportionate share adjustment will be applied only to the Federal national rate in determining which of the three rates yields the highest aggregate payment amount.

Comment: We received one comment from a fiscal intermediary concerning the impact that the revised disproportionate share payment formula would have on some hospitals. The intermediary noted that five of the hospitals it services would receive disproportionate share payments of between 50 and 63 percent of its DRB-based payments.

This commenter felt that HCFA should explain the rationale for such high disproportionate share adjustments since it appears that qualifying criteria and payment adjustments under this provision were arrived at in an arbitrary fashion.

Response: Under section 9105(a) of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Pub. L. 99–272), Congress added an explicit adjustment for hospitals with a disproportionate share of low-income patients, effective for discharges on or after May 1, 1986. The qualifying criteria were also delineated by Congress. This provision was based, in part, on the analyses conducted by the Congressional Budget Office (CBO) that indicated that urban hospitals with 100 or more beds and disproportionate patient share percentages of 15 percent or higher incurred higher Medicare costs per case than other hospitals. CBO did not, however, find evidence to support a disproportionate share adjustment for urban hospitals with fewer than 100 beds or for rural hospitals. Nevertheless, Congress did provide an adjustment for those groups of hospitals using significantly higher qualifying criteria than for urban hospitals with 100 beds or more. In addition, section 6003(c)(2) of Pub. L. 101–239 expanded the qualifying criteria and increased the payment adjustments for some aspects of the disproportionate share adjustment effective with discharges occurring on or after April 1, 1990.

Comment: One commenter stated that the disproportionate share adjustment under Medicare should be expanded to include qualifying methodologies for psychiatric hospitals, which are excluded from the prospective payment system.

Response: Section 1886(d)(5)(F) of the Act explicitly provides for the disproportionate share adjustment to payments made to hospitals under the prospective payment system. There is no provision for a disproportionate share adjustment to payments made to hospitals that are excluded from the prospective payment system nor do we believe that such an adjustment would be appropriate. Subject to the rate of increase limit, hospitals that are excluded from the prospective payment system are paid for the reasonable costs that they incur in furnishing services to Medicare beneficiaries. To the extent that they incur generally higher costs for treating a disproportionate share of low income patients, these higher costs are reflected in the reasonable cost determination. An explicit disproportionate share adjustment would result in program payments in excess of the reasonable costs incurred for Medicare beneficiaries. We believe that this would violate the basic principle set forth in section 1861(v)(1)(A) of the Act that the costs of non-Medicare patients should not be borne by the Medicare program.

Comment: One commenter believes that the disproportionate share adjustment calculation should be expanded to include days that Medicare patients utilize health maintenance organizations (HMOs) since these beneficiaries are entitled to Part A benefits.

Response: Based on the language of section 1886(d)(5)(F)(vi) of the Act, which states that the disproportionate share adjustment computation should include "patients who were entitled to benefits under Part A", we believe it is appropriate to include the days associated with Medicare patients who receive care at a qualified HMO. Prior to December 1, 1987, we were not able to isolate the days of care associated with Medicare patients in HMOs and, therefore, were unable to fold this number into the calculation. However, as of December 1, 1987, a field was included on the Medicare Provider Analysis and Review (MEDPAR) file that allows us to isolate those HMO days that are associated with Medicare patients. Therefore, since that time, we have been including HMO days in SSI/Medicare percentage.

B. Payments to Sole Community Hospitals and Medicare-Dependent, Small Rural Hospitals (§§ 412.92 and 412.108)

Under the prospective payment system, special payment protections are provided to SCHs. An SCH is a hospital that, by reason of factors such as isolated location, weather conditions, travel conditions, or absence of other hospitals, is the sole source of inpatient hospital services reasonably available to Medicare beneficiaries. The regulations that set forth the criteria that a hospital must meet to be classified as an SCH and the special payment adjustments available to those hospitals are at § 412.92.

Prior to enactment of Public Law 101-239, section 1886(d)(5)(C)(ii) of the Act provided that SCHs be paid a blended rate based on 75 percent of the hospital-specific rate and 25 percent of the Federal regional rate. In addition, for cost reporting periods beginning before October 1, 1990, an SCH is eligible for a payment adjustment if, for reasons beyond its control, it experiences a decline in volume of greater than 5 percent compared to its preceding cost reporting period. (This adjustment is also available to a hospital that could qualify as an SCH but chooses not to be paid as an SCH.)

Section 6003(e) (1) and (2) of Public Law 101-239, which amended section 1886(d)(5) of the Act, revised both the qualifying criteria and payment methodology for SCHs. However, section 6003(e)(3) of Public Law 101-239 specifically states that any hospital classified as an SCH on December 19, 1989 will continue to be so classified regardless of whether it meets the revised criteria resulting from changes made in implementing section 6003(e)(1) of Public Law 101-239.

Section 1886(d)(5)(D)(iii)(I) of the Act incorporates the mileage standard that was established by regulation effective October 1, 1989 (54 FR 36480; September 1, 1989). Thus, Congress has ratified our policy that a hospital can qualify for SCH status if it is more than 35 road miles from another hospital. Since this policy had already been incorporated into the regulations at § 412.92(a)(1), we made no further change in the April 20, 1990 final rule with comment.

Section 6003(e) of Public Law 101-239 also revised the payment methodology for hospitals classified as SCHs effective with cost reporting periods beginning on or after April 1, 1990. As of that date, as provided in section 1886(d)(5)(D)(i) of the Act, SCHs will be paid based on whichever of the following rates yields the greatest aggregate payment for the cost reporting period: the Federal national rate applicable to the hospital, the updated hospital-specific rate based on FY 1982 cost per discharge, or the updated hospital-specific rate based on FY 1987 cost per discharge.

In the April 20, 1990 final rule with comment, we stated that the SCH's fiscal intermediary will determine for each cost reporting period which of the payment options will yield the highest payment rate. Payments will automatically be made at the highest rate based on the best data available at the time of the intermediary's determination. However, it may not be possible for the fiscal intermediary to determine in advance precisely which of the rates will yield the highest aggregate payment for the year. This is because, in many instances, the hospital's FY 1987 cost report had not yet been audited and, in all instances, it was not possible to forecast the October 1, 1990 update factor for the Federal rates, outlier payments, the amount of the disproportionate share adjustment, or the indirect medical education adjustment, all of which are applicable only to payment based on the Federal rate. Therefore, the intermediary will make its determination based on what appears to yield the highest payment amount.

We provided that a final adjustment be made at the close of the hospital's cost reporting period to determine precisely which of the three payment rates yielded the highest payment to the hospital. The settlement will take into account all of the adjustments described above. If a hospital disagrees with the intermediary's determination regarding the final amount of program payment to which it is entitled under this provision, it has the right to appeal the intermediary's decision in accordance with the criteria in subpart R of part 405 of the regulations, which concern provider payment determinations and appeals.

The April 20, 1990 document described the methodology we will use to calculate the hospital-specific rate based on an FY 1987 cost reporting period. We stated that FY 1987 cost reporting periods are those 12-month or longer cost reporting periods ending on or after September 30, 1987 and before September 30, 1988. If the hospital's last cost reporting period ending before September 30, 1988 is for a period of less than 12 months, we use the hospital's most recent 12-month or longer cost reporting period ending before the short period report.

The final rule with comment provided that if a hospital has no cost reporting period beginning in FY 1987, it will not have a hospital-specific rate based on FY 1987. The hospital will not be allowed to substitute any other base period for the FY 1987 base period.

We stated that for each SCH, the intermediary will calculate an FY 1987 hospital-specific rate as follows:

- Determine the hospital's total allowable Medicare inpatient operating cost, as stated on the FY 1987 cost report.
- Divide the total Medicare inpatient operating cost by the number of Medicare discharges in the cost reporting period to determine the FY 1987 base-period cost per case.
- Divide the base-period cost per case by the hospital's case-mix index applicable to the FY 1987 cost reporting period.

Each SCH will be informed of its FY 1987 hospital-specific rate within 180 days of the start of its cost reporting period beginning on or after April 1, 1990 (the first cost reporting period to which the new payment methodology applies). We also provided that, based on the decision of the U.S. Court of Appeals for the District of Columbia circuit in *Georgetown University Hospital* v. *Bowen*, 862 F. 2d 323 (D.C. Cir., 1988), any adjustments made to a hospital's FY 1987 hospital-specific rate due to a favorable appeal would be made retroactively to the time of the intermediary's initial determination. We added a new § 412.75 to describe

calculating the hospital-specific rate based on a FY 1987 base period.

In addition to the changes described above, a new section 1886(d)(5)(D) of the Act deleted the sunset date on the 5 percent volume decline adjustment, thus allowing SCHs to receive the adjustment indefinitely. We amended § 412.92(e) and (f) to reflect this change.

Section 6003(f) of Public Law 101-239, which added a new section 1886(d)(5)(G) of the Act, created a new category of hospitals eligible for a special payment adjustment under the prospective payment system. The adjustment is limited to Medicare-dependent, small rural hospitals (MDHs) and is effective for cost reporting periods beginning on or after April 1, 1990 and ending on or before March 31, 1993. Section 1886(d)(5)(G)(iii) of the Act defines an MDH as any hospital that meets all of the following criteria:

- The hospital is located in a rural area.
- The hospital has 100 or fewer beds.
- The hospital is not classified as an SCH (as defined at § 412.92) at the same time that it is receiving payment under this provision.
- In the hospital's cost reporting period that began during FY 1987, not less than 60 percent of its inpatient days or discharges were attributable to inpatients entitled to Medicare Part A benefits.

For purposes of determining a hospital's bed size, we are using the same definition that is currently used for determining number of beds to calculate the indirect medical education adjustment, the disproportionate share adjustment, and to detemine rural referral center eligibility. This definition, which is set forth at § 412.118(b), states that the number of beds in a hospital is determined by counting the number of available bed days during the hospital's cost reporting period, not including beds assigned to newborns, custodial care, and excluded distinct part units, and dividing that number by the number of days in the cost reporting period.

For determining whether at least 60 percent of the hospital's inpatient days or discharges were attributable to Medicare Part A beneficiaries, we provided that days and discharges are counted from the hospital's 12-month or longer cost reporting period that ended on or after September 30, 1987 and before September 30, 1988. Only days and discharges from acute care inpatient hospital stays in the area of the hospital subject to the prospective payment system are included.

If the hospital's last cost reporting period ending before September 30, 1988 is for a period that is less than 12 months, we provided that days and discharges are to be counted for the hospital's most recent 12-month or longer cost reporting period ending before the short period report. We also provided that days and discharges from swing beds are counted if the discharges were for acute care inpatient hospital stays. The Medicare count of days and discharges include only those days and inpatient stays for which benefits were payable under part A.

To not disadvantage hospitals that receive payment from a health maintenance organization (HMO) or a competitive medical plan (CMP) for inpatient care provided to Medicare part A beneficiaries enrolled with the HMO or CMP, we provided that the days and discharges for those stays are counted. These days and discharges do not appear on the hospital's cost report as Medicare days and discharges. Thus, the hospital should notify its intermediary and provide documentary evidence to support the number of days and discharges attributable to Medicare HMO or CMP enrollees that should be included in the intermediary's determination of the hospital's Medicare utilization.

As set forth in section 1886(d)(5)(G)(i) of the Act, hospitals meeting the above criteria are paid using the same methodology applicable to SCHs, that is, based on whichever of the following rates yields the greatest aggregate payment for the cost reporting period:

- The national Federal rate applicable to the hospital;
- The updated hospital-specific rate using FY 1982 cost per discharge; or
- The updated hospital-specific rate using FY 1987 cost per discharge.

We explained that hospitals do not need to take any action to qualify for this adjustment because the fiscal intermediary will determine for each cost reporting period which hospitals meet the criteria to qualify as MDHs prior to the start of the hospital's first cost reporting period beginning on or after April 1, 1990. In addition, the intermediary determines for each cost reporting period which of the payment options yields the highest rate of payment to a hospital that qualifies as an MDH in the same manner as described above for SCHS.

At the time the year-end settlement is made for purposes of determining which of the three payment rates yielded the highest payment to the hospital, an MDH's cost report is also reviewed to ensure that it meets all the qualifying criteria, that is, that it is located in a rural area, that its bed count for the cost reporting period was 100 or fewer beds, and that it did not qualify as an SCH at the same time that it was receiving payments as an MDH.

For purposes of counting beds, the most recently submitted cost report is used by the fiscal intermediary to determine whether a hospital meets this criterion provisionally. A final determination is made each year based on its average number of beds during the cost reporting period. If a hospital's number of beds has changed since its most recent cost report was submitted and it believes it meets the criteria to qualify for this adjustment, the hospital must notify its intermediary and submit documentary evidence that its bed count is not above 100 beds.

As discussed above, we provided that the intermediary uses the hospital's FY 1987 cost report to determine if it meets the 60 percent Medicare dependency requirement on the basis of either days or discharges. If a hospital believes that the data in its cost report does not accurately reflect its Medicare utilization, it must notify its intermediary and submit verifiable documentation to prove that it meets the 60 percent Medicare-patient utilization requirement.

Whether the intermediary determines a hospital's classification as an MDH based on its own data or after a hospital's request, the classification is effective with the start of the cost reporting period in which the hospital first meets all the qualifying criteria effective with the first cost reporting period that begins on or after April 1, 1990.

Each MDH will be informed of its FY 1987-based hospital-specific rate within 180 days after it qualifies as an MDH. That is, any hospital that the intermediary identifies as qualifying for MDH status will be notified of its hospital-specific rate within 180 days after the start of its cost reporting period beginning on or after April 1, 1990. However, any hospital that is identified as an MDH by the intermediary after the start of its cost reporting period will be notified of its hospital-specific rate within 180 days after the intermediary determines that it meets the qualifying criteria.

Since we implemented the provisions of sections 1886(d)(5) (D) and (G) concerning the special payment provisions for SCHs and MDHs, we have discovered a special circumstance that should be taken into account in calculating the FY 1987 hospital-specific rate for these hospitals. Effective with cost reporting periods beginning on or after October 1, 1987, distinct part alcohol/drug units were no longer excluded from the prospective payment

system. Therefore, the costs associated with such a unit would not be included in an SCH's or MDH's inpatient operating costs for its FY 1987 cost reporting period, but would be included in those costs for all succeeding cost reporting periods.

So that an SCH or MDH that had an excluded alcohol/drug unit during its FY 1987 cost reporting period will not be disadvantaged, we will allow such a hospital to receive an adjustment to its FY 1987 hospital-specific rate to account for the operating costs associated with that distinct part unit when it was made subject to the prospective payment system as part of the SCH or MDH. Hospitals that believe they should receive this adjustment should contact their fiscal intermediary.

Comment: We received many comments regarding how swing bed days should be counted in determining whether a hospital was at least 60 percent Medicare-dependent during its cost reporting period that began during FY 1987. Several commenters noted that although the preamble to the April 20, 1990 final rule with comment period stated that days and discharges from swing beds will be counted if the discharges were for acute care inpatient hospital stays, the regulations text at § 412.108(a)(2) stated that for purpose of determining a hospital's status, "only days and discharges from acute care impatient stays are counted, including days and discharges from swing beds." Some commenters concluded that the language of the regulation implied that days and discharge from a skilled nursing facility (SNF) level of care could be counted in determining Medicare dependency.

Response: The word "hospital" was inadvertently omitted in preparing the regulations text. Under Medicare, there are two types of covered care that can be provided in a swing bed: acute inpatient hospital care and SNF care. Only days and discharges for acute inpatient hospital care are to be counted in determining whether a hospital was at least 60 percent Medicare-dependent during its cost reporting period beginning during FY 1987. SNF days and discharges are not to be included in the count. The MDH provision applies to hospital services only and we do not believe it would be equitable to include other than acute inpatient hospital services in determining whether a hospital qualifies for the provision. We have revised § 412.108(a)(2) to clarify our policy.

Comment: Several commenters asked whether days and discharges for Medicare beneficiaries could be included in determining Medicare-dependency where the care would have been covered by Medicare, except that Medicare was the secondary payor and the primary payor paid for the entire stay. We were asked specifically about how to treat veterans benefits and automobile accident policy payments. In addition, we were asked if part A benefits had been exhausted, could part B-only stays be counted, and whether patient transfers could be counted as discharges.

Response: Section 1886(d)(5)(G)(iii)(IV) of the Act states that Medicare-dependency is measured by whether "not less than 60 percent of its inpatient days or discharges during the cost reporting period beginning in fiscal year 1987 were attributable to inpatients entitled to benefits under part A." The scope of benefits to which an individual is entitled to payment under part A set forth in section 1812 of the Act with respect to inpatient hospital services, are limited to 90 days during each benefit period. An additional lifetime reserve of 60 days may be drawn upon when an individual exceeds 90 days in a benefit period. Entitlement to payment under part A ceases after the beneficiary has used 90 days in a benefit period and has either exhausted the lifetime reserve days or elected not to use available lifetime reserve days.

The secondary payment provisions under section 1862(b) of the Act do not affect an individual's entitlement to part A benefits but rather the amount of payment that will be made by Medicare for services furnished to a beneficiary. The Medicare payment amount can range all the way from zero up to the full DRG amount, depending upon the primary payer's payment. However, while Medicare's payment (and the days of utilization counted for benefit period purposes) may be proportionately less than they would be if Medicare were the primary payer, the beneficiary is still entitled to Medicare benefits, and the services furnished to him or her, which are covered under section 1812 of the Act. Therefore, we believe the days and discharges from such a stay should be included in determining a hospital's Medicare dependency for 1987.

We do not believe days and discharges for part B—only stays should be counted. Again, for the MDH provision, section 1886(d)(5)(G)(iii)(IV) of the Act states that Medicare dependency is limited to consideration of those inpatients entitled to part A benefits. Since patients who have exhausted their part A benefits are no longer entitled to payment under part A, we do not believe such stays should be counted. Of course, if the patient was a hospital inpatient at a prospective payment hospital at the time part A benefits were exhausted, that stay is covered and will count as one discharge. If the benefits are exhausted prior to the stay going into outlier status, all the days of the stay are covered and counted. If the benefits are exhausted during the outlier portion of the stay, only those days prior to exhaustion of the part A benefit are counted.

Under § 412.4, a transfer to another acute care hospital is not considered a discharge for DRG payment purposes. However, for other purposes, a discharge is defined as the formal release of a patient, including death, but excluding newborns and patients who are dead on arrival. For purposes of determining whether a hospital was at least 60 percent Medicare-dependent, we believe a patient transfer should be counted as a discharge regardless of whether the patient was transferred to another acute care hospital, to an area of the hospital not covered under the prospective payment system, or to a less intense level of care. The days for the acute care inpatient hospital portion of the stay should also, of course, be counted in calculating a hospital's Medicare-dependency based on days. The definition of discharges for purposes of the 60-percent Medicare-dependency test is consistent with our definition of discharges for cost reporting purposes and for purposes of determining the hospital-specific rate. We note that the April 20, 1990 final rule with comment period did not explicitly discuss how transfers will be counted in determining the FY 1987 base period cost per discharge. As was the case with the determination of the FY 1982 base period cost per discharge, all transfers will count as discharges in calculating the hospital's FY 1987 Medicare allowable cost per discharge. We are clarifying § 412.75(b) to indicate that a transfer will count as a discharge in calculating the hospital's base period cost per discharge. A similar change has been made in § 412.108(a)(2) for purposes of determining whether the hospital meets the 60-percent Medicare dependency test.

Comment: One commenter suggested that a fiscal intermediary can more easily identify HMO and CMP enrollees than can a hospital and the commenter recommended that for purposes of identifying days and discharges for these beneficiaries for MDH purposes, the intermediary should be responsible for automatically including days and discharges in its calculations.

Response: We do not agree that identification of HMO and CMP enrollees should be the responsibility of

the fiscal intermediary. Prior to December 1, 1987, hospitals were not required to submit bills for inpatient services furnished to Medicare beneficiaries who were enrolled in an HMO; therefore, no data are available on the days and discharges attributable to such beneficiaries for portions of FY 1987 cost reporting periods occurring before December 1, 1987. Although hospitals have submitted no-pay bills for Medicare beneficiaries who are HMO enrollees since December 1, 1987, information on these beneficiaries is not retained separately in intermediary records from other no-pay bills. The intermediary would need the beneficiary's health insurance claim number in order to be able to identify an HMO enrollee. Consequently, the hospital is generally in a better position to identify HMO and CMP enrollees than the intermediary. However, if a particular hospital is experiencing difficulty in identifying the appropriate cases and believes the identification of such enrollees would have an effect on its MDH status, it may contact its intermediary to determine if the intermediary can provide assistance to the hospital.

Comment: Section 1886(d)(5)(G)(iii)(IV) of the Act defined an MDH as a hospital that among other criteria was at least 60 percent Medicare-dependent, by days or discharges, "* * * during the cost reporting period *beginning in fiscal year 1987* * * *" [Emphasis added.] The regulation at § 412.108(a)(iii) stated that the 60 percent Medicare-dependency must have been for the "* * * hospital's 12 month or longer cost reporting period ending on or after September 30, 1987 and before September 30, 1988 * * *." A commenter asked whether a hospital that had a shorter or a longer cost reporting period that began during FY 1987 but that did not end after September 30, 1987 and before September 30, 1988 could be considered eligible for the MDH provision. The commenter also asked whether the same shorter or longer period cost report could be used to calculate the FY 1987 hospital-specific amount.

Response: We recognize that the definition given in the regulation could cause some difficulty for hospitals that may have changed the end of their fiscal year or may have closed and reopened during the period in question. For this reason, we are expanding our definition somewhat. If a hospital does not have a 12-month cost reporting period ending on or after September 30, 1987 and before September 30, 1988, then the fiscal intermediary should determine if the hospital had a cost reporting period that began during FY 1987. This revision in the definition may permit a hospital to qualify for MDH status that would have been denied under our prior definition.

If the cost reporting period beginning in FY 1987 is for less than 12 months, the intermediary must "back up" to the most recent 12-month period ending prior to the short cost reporting period to determine both Medicare-dependency and the base period for calculating the hospital specific amount. If the cost reporting period beginning in FY 1987 is for more than 12 months, this period should be used to determine whether the hospital meets the Medicare-dependency criterion and in calculating the highest of the three possible payment amounts. This policy will also be applied to calculating the FY 1987 hospital-specific rate for an SCH.

Comment: One commenter suggested that we revise § 412.75(f) to clarify the appeals process for determinations of the hospital-specific rate based on the FY 1987 base period. The commenter also took issue with the provision that a hospital's FY 1987 hospital-specific rate would be modified if certain revisions were made to the hospital's "base-period notice of amount of program reimbursement (NPR)." The commenter believes that the reference to the NPR is inappropriate since, for FY 1987, SCHs and MDHs were not paid for inpatient operating costs on a reasonable cost basis and their base-period costs will not be based on an NPR determination.

Response: We agree that the process for appealing intermediary determinations of the hospital-specific rate needs to be clarified, and we are amending the regulations to provide specific authorization for such appeals in § 412.75. This regulation now provides that a determination of a hospital's hospital-specific rate will be treated as a final intermediary determination of the amount of program reimbursement for purposes of the administrative and judicial review provisions set forth in subpart R of part 405.

We disagree, however, that the regulations need not also take into account changes to the base-period notice of amount of program reimbursement that result from administrative and judicial review. The commenter correctly noted that the FY 1987 notice of amount of program reimbursement for SCHs and MDHs did not determine allowable inpatient operating costs on a reasonable cost basis. However, this does not mean that revisions to or appeals of the base-period notice of program reimbursement will have no impact on the determination of base-period inpatient operating costs. For example, the determination of base-period inpatient operating costs could be affected by the same circumstances that cause a revision in the intermediary's determination of allowable outpatient costs. For this reason, we are providing in § 412.75(g) that a hospital's hospital-specific rate for FY 1987 will be revised to reflect not only any modifications resulting from administrative and judicial review of the hospital-specific rate determination, but also increases or decreases in costs recognized as allowable for the hospital's base period as a result of administrative or judicial review of the base-period notice of amount of program reimbursement.

Comment: One commenter requested certain protections to avoid the possibility of error in a fiscal intermediary's initial determination of which of the three payment rates yields the highest aggregate payment for an SCH or MDH. The commenter was concerned that if an intermediary used an inappropriate estimating method or made a calculation error in determining the most advantageous rate, the hospital would have to wait a substantial period of time, and perhaps incur serious cash flow problems, before any final settlement or reevaluation of the aggregate rate determinations would be made. Accordingly, the commenter suggested the fiscal intermediaries be required to furnish each SCH and MDH a copy of the calculations used to make the initial determination of the highest aggregate payment amount, as well as a copy of the calculations used to determine the final payment amount. The commenter also suggested that the intermediary be required to take into account any additional information the hospital may provide and to consider an interim adjustment prior to the end of the cost reporting period if additional data result in more favorable payment for the hospital.

Response: We believe current program practices already meet the commenter's concern. For interim payment purposes, it is not necessary to estimate aggregate payments over the cost reporting period. Payments will continue to be made on an individual bill basis; therefore, it is necessary only to determine which of the three rates (that is, the 1982 hospital-specific rate, the 1987 hospital-specific rate, or the Federal rate) is likely to result in the highest payment. This determination is made by the PRICER program used to pay Medicare bills. All bills will be priced based on the Federal rate. In

addition, if PRICER determines that the hospital-specific rate would yield, on average, a higher payment, an add-on payment will be made for each discharge based on the estimated difference between the higher hospital-specific rate and the average Federal payment for that DRG.

Determining which of the two hospital-specific rates yields the higher aggregate payment amount is fairly straightforward. If a hospital is dissatisfied with the intermediary's determination of the FY 1987 hospital-specific rate, it may appeal that determination upon receipt of the notice of the rate, as discussed in the response to the immediately preceding comment.

The more difficult comparison is between the higher hospital-specific rate and the Federal rate. The difficulty is that aggregate Federal payments are affected by a number of factors that cannot be determined precisely in advance, such as the amount of outlier payments, the disproportionate share adjustment, and the indirect medical education adjustment. However, as explained in the April 20, 1990 final rule with comment period, interim payment will automatically be made at the highest rate using the best data available. As with all interim payments, the hospital will be permitted to submit any additional data that it believes might affect the estimate of its Federal rate. These data could include updated information for purposes of estimating the indirect teaching or disproportionate share factors. PRICER uses the rural national average outlier experience to estimate average outlier payments, which we believe is an adequate estimate for interim payment purposes. Final settlement will take into account actual outlier payments.

A hospital has the necessary information to estimate its average Federal rate. The formula for doing so is as follows:

1. Multiply the labor-related portion of the standardized amount by the applicable wage index and add the product to the nonlabor-related portion of the standardized amount.

2. Multiply the amount determined in Step 1 by the sum of 1 plus the applicable indirect teaching adjustment factor and the disproportionate share adjustment factor.

3. For discharges occurring on or after October 1, 1990, multiply the amount determined in Step 2 by 1.02315 to determine the estimated average Federal rate including outlier payments. (For discharges occurring before October 1, 1990, the factor is 1.02197).

4. If the hospital-specific rate is higher than the estimated average Federal rate determined in Step 3, determine the difference. To determine the add-on for a specific case, multiply the difference by the DRG weight for the case.

We do not believe it is necessary to require an intermediary to issue these calculations routinely to each hospital. Finally, if, based on the submission of additional information or the identification of a calculation error, the determination of the highest aggregate payment is determined to be incorrect, the intermediary should adjust payments as soon as possible without waiting until final settlement of the hospital's cost report. This is consistent with our general policy for adjusting interim payments.

C. Recognition of Nursing School Costs (§§ 412.113(b) and 413.85)

1. Background

Medicare has historically paid a share of the net cost of approved medical education activities. Regulations concerning Medicare payment for nursing and allied health educational costs are located at §§ 412.113(b) and 413.85. Section 413.85(b) defines approved educational activities as formally organized or planned programs of study usually engaged in by providers in order to enhance the quality of patient care in an institution. Under § 413.85(e), approved medical education activities include training programs for nurses.

Section 413.85(a) specifies that the allowable cost of approved educational activities is the net cost, which is determined by deducting tuition revenues from total costs. The net costs incurred for classroom and clinical training in an approved nursing education program operated by the provider are included within the definition of allowable medical education costs. Under sections 1886 (a)(4) and (d)(1)(A) of the Act and § 412.113(b) of the regulations, the costs of approved medical education activities are excluded from the definition of operating costs and, in the case of approved nursing education programs operated by the provider, are paid on a reasonable cost basis.

Section 413.85 excludes costs incurred for nonprovider-operated programs from the definition of the approved medical education activities. The costs incurred by a hospital to support a nonprovider-operated nursing education program, to the extent they are allowable, are considered normal operating costs and are included in the DRG payment for inpatient services and are paid on a reasonable cost basis for outpatient services.

The allowable costs of nonprovider-operated nursing education programs are defined in chapter 4 of the Provider Reimbursement Manual (HCFA Pub. 15-1). Under our current policy, costs incurred by the hospital for clinical training at the hospital that relate to care of the hospital's patients are allowable. In cases in which classroom training occurs at the hospital, costs incurred by the hospital are allowable if—

- The hospital's support does not constitute a redistribution of nonprovider costs to the hospital;
- The hospital is receiving a benefit for the support it furnishes; and
- The hospital's support is less than the cost the hospital would be expected to incur with a program of its own.

2. Section 6205 of Public Law 101-239

Section 6205(a) of Public Law 101-239 created a new temporary category of "hospital-based nursing schools" in addition to those recognized under §§ 412.113(b) and 413.85. Costs incurred by hospitals for training nursing students enrolled in these schools are to be paid on the basis of reasonable cost as though the hospital met the criteria at § 413.85. As specified in section 6205(a)(1)(A) of Public Law 101-239, costs incurred by a "hospital-based nursing school" will qualify under this provision—

"* * * if, before June 15, 1989, and thereafter, the hospital demonstrates that for each year, it incurs at least 50 percent of the costs of training nursing students at such school, the nursing school and the hospital share some common board members, and all instruction is provided at the hospital or, if in another building, a building on the immediate grounds of the hospital."

We provided that to meet the first criterion, the hospital must incur at least 50 percent of the total costs, that is, the costs before deduction of tuition revenues, incurred for classroom and clinical training provided to students enrolled in an approved nursing education program at the hospital-based nursing school. This includes programs in both professional and practical nursing that are approved by the appropriate approving body under § 413.85(e). We note that approved allied health education programs are not included in this provision. Moreover, we provided that a hospital would not be considered to be incurring costs through payments to an educational institution for training of students.

Neither section 6205 of Public Law 101-239 nor the Committee Report (H.R. Rep. No. 386, 101st Cong., 1st Sess. (1989)) that accompanied Public Law

101–239 elaborates on the second criterion, that the nursing school and the hospital share some common board members. We provided that we consider this requirement to be met if at least 50 percent of the board with fewer members (either the hospital or the nursing school) are also members of the board of the other entity, regardless of the number of members of the larger board.

The third criterion, that all instruction be provided at, or on the immediate grounds of, the hospital is clarified in the Conference Committee Report (H.R. Rep. No. 386, 101st Cong., 1st Sess. 669 (1989)). The report states that a program complies with this requirement "* * * only if this instruction occurs on the hospital campus, *not on the campus of an institution with which the hospital is affiliated*." (Emphasis added.) In instances where the hospital is contiguous to, or within, the campus of an educational institution, this criterion will be considered to be met only if the instruction is provided at the hospital.

Section 6205(b)(2)(A) of Public Law 101–239 requires that the Secretary issue proposed regulations before July 1, 1990 that specify—

- The relationship required between an approved nursing education or allied health education program and a hospital for the program's costs to be attributed to the hospital;
- The types of costs related to nursing or allied health education programs;
- The distinction between costs of approved educational activities paid on the basis of reasonable cost and educational costs treated as operating costs of inpatient hospital services; and
- The treatment of other funding sources for the program.

Section 6205(b)(2)(B) of Public Law 101–239 provides that the final rule will not be effective before October 1, 1990, or 30 days after publication of the final rule in the **Federal Register**, whichever is later.

In addition, section 6205(b)(2)(A) of Public Law 101–239 provides that during the period after December 18, 1989 and before October 1, 1990, there is to be no recoupment of overpayments attributable to nursing and allied health costs that have been reported as allowable medical education costs payable on a reasonable cost basis and later have been determined to not meet the definition of these costs. We have issued program instructions to our intermediaries to implement this provision.

Section 6205(a)(2) Public Law 101–239 states that the new "hospital-based nursing school" provision applies to cost reporting periods beginning on and after enactment and "* * * on or before the date on which the Secretary issues regulations pursuant to subsection (b)(2)(A) (section 6205(b)(2)(A) of Public Law 101–239)." In citing section 6205 (b)(2)(A), section 6205(a)(2) of Public Law 101–239 presents us with a logical inconsistency.

Subparagraphs (A) and (B) of section 6205(b)(2), taken together, make it clear that the regulations referred to in section 6205(b)(2)(A) are proposed regulations, to be issued before July 1, 1990, and to be followed by a 60-day comment period. The final regulations (to which, it is assumed, the term "regulations" in section 6205(a)(2) of Public Law 101–239 refers) are to be effective no earlier than October 1, 1990. In light of the common understanding of the term "regulations", we provided that the temporary category of "hospital-based nursing schools" will expire with a hospital's first cost reporting period beginning on or after the date of the final regulations required by section 6205(b)(2)(B)(iii) of Public Law 101–239 are issued.

Given the temporary and limited applicability of section 6205(a) of Public Law 101–239, we did not amend the codified regulations to reflect the implementation of the policies explained above.

3. Comments and Responses

Two commenters are concerned with our interpretation of section 6205(a) of Public Law 101–239 concerning the recognition of costs of approved nursing education and allied health education programs not operated directly by a hospital to the extent that these policies will be incorporated into the regulations required under section 6205(b)(2)(B) of Public Law 101–239. As noted above, section 6205(b)(2)(B) of Public Law 101–239 requires the Secretary to publish final regulations to be effective no earlier than October 1, 1990 that address the types of nursing and allied health education costs that should be considered allowable and which of these allowable costs should be treated as operating costs and which should be treated as pass-through costs and paid on a reasonable cost basis.

We will be publishing the regulations required by section 6205(b)(2)(A) of Public Law 101–239 as a separate proposed rule with a 60-day comment period. The proposed rule will be separate from and not contingent upon any of the provisions in this final rule concerning hospital-based nursing schools. We have addressed the specific concerns of those who commented on section 6205(b) of Public Law 101–239 as well as the other comments we received on our implementation of the provisions of section 6205(a) in the April 20, 1990 final rule with comment.

Comment: A commenter believes that there is no basis in section 6205(a) of Public Law 101–239 or its legislative history for a requirement that at least 50 percent of the board with fewer members (either the hospital or the nursing school) be members of the board of the other entity. The commenter noted that the law provides that the hospital and nursing school share "some" common board members. The commenter cited Webster's dictionary, in which "some" is defined as "being at least one * * *", which the commenter believes should be the minimum requirement for overlapping board membership. Another commenter's experience is that the 50 percent requirement is much too onerous. The commenter believes that it is unrealistic to expect that the governing bodies of two large organizations will have such a substantial overlap. Other commenters suggested that at least two members or 30 percent of the smaller board be the minimum requirement.

Response: When writing a rule to implement a statutory provision, we first look to the legislative history for clarification of provisions in the statute. In this case, the Conference Committee Report that accompanied Public Law 101–239 is silent on the issue of what the Congress meant by "some." The definition of "some" cited by one of the commenters is one of three definitions of the word "some", as an amount or quantity, in Webster's dictionary. However, the other two definitions have in common a definition of "some" as an unspecified number or amount. We believe that common usage tends much more toward this definition, rather than that cited by the commenter. Therefore, we have not accepted the comment that "some" should be defined as "at least one".

In the absence of any specific explanation of Congressional intent, we look to the overall language of a statutory provision for a common-sense explanation of a specific requirement. In this case, the other two criteria for a hospital-based nursing school are that all instruction be provided at the hospital and that the hospital incur at least 50 percent of the school's cost. In using the word "some" for the board overlap requirement, we concluded that the Congress intended that there be an appreciable overlap between board members. In most situations, we believe that our policy that at least 50 percent of the board with fewer members must

also be members of the other board is a reasonable standard.

For example, if a nursing school has an 8-member board and a hospital has a 30-member board, this criterion would be met if 4 members of the nursing school's board were also members of the hospital's board. Thus, less than 14 percent of the larger board would consist of members of the smaller board.

At the same time, we recognize that if both boards are large, there may be situations where the 50 percent standard would not be reasonable in determining whether the board membership criterion are met. Therefore, we are modifying our policy to provide that the lesser of 4 board members or 50 percent of the members of the smaller board must be common board members.

Comment: One commenter stated that, in determining whether a hospital-based nursing school meets the common board membership criterion, HCFA should recognize overlapping board membership between a nursing school and a corporate parent organization of the hospital, since this organization owns or controls the hospital.

Response: We do not believe that we should revise the policy as proposed by the commenter. Section 6205(a)(1)(A) of Pub. L. 101-239 clearly requires that the hospital share some common board members with the nursing school. Moreover, our policy is consistent with other aspects of the Medicare program. For example, in determining whether a nursing education program is provider-operated, we look to whether the hospital actually operates the program. If the program is operated by a parent corporation rather than the hospital, we do not consider the program to be provider-operated.

Comment: Two commenters stated that it is unreasonable to require that the hospital incur 50 percent or more of the total costs of the nursing program; that is, the costs before deduction of tuition revenues. The commenters also suggested that support payments made by the hospital to the nursing school should be recognized in applying the 50 percent test. The commenters believe that the requirement that the hospital directly incur 50 percent of the total cost unnecessarily interferes with the administration of the nursing school by requiring that, for example, more faculty be salaried by the hospital than by the school, or that more of the facility costs be paid by the hospital than by the school so the costs are directly incurred by the hospital. Thus, this policy also interferes with the school's ability to demonstrate that it operates as a separate corporation under its own governing authority as required by certain accrediting organizations. The commenters suggest that a payment by the hospital equal to at least 50 percent of the net cost of the program should be sufficient to satisfy the support requirement.

Response: We agree with the commenter that the requirement should be 50 percent of the net costs rather than total costs and that payments to the nursing school should be recognized in applying the criterion. Program policy has been to recognize the net cost of educational activities for Medicare payment purposes. Net cost is defined as total cost less tuition revenues.

There are probably few situations where the use of net cost rather than total costs would make any difference. This is because the tuition offset should ordinarily be proportional to the costs incurred by each entity. We recognize, however, that there may be situations in which a proportional offset would not be appropriate. For example, a nursing education program's established policy could be that students pay tuition while in the classroom education portion of the program at a college. When the students move to the clinical education portion of the program at the hospital, they may pay no tuition or a reduced tuition amount or are paid a stipend, or both. In such situations, a proportional offset of tuition income would not be appropriate.

To accommodate these situations, we are revising our policy to provide that the hospital must incur 50 percent of the net cost of the nursing education program. If the hospital supports the nursing education program in cash rather than in kind, the payments to the nursing school are allowable costs if the hospital's support does not constitute a redistribution of the nonprovider's costs to the hospital, and the support is less than the provider would incur in running its own program. If the costs are allowable, they are included in the hospital's costs for purposes of the 50 percent test. The hospital must furnish auditable documentation that the hospital incurs, either in cash or in kind, 50 percent of the net cost of the nursing education program. A full costing methodology, such as that provided for in the latest version of A Cost Accounting Handbook for College and Universities published by the National Association of College and University Business Officers or in OMB Circular A-21, Cost Principles for Educational Institutions, should be used to determine the cost to the college for the nursing school.

Comment: One commenter was concerned that a nursing school's use of a building on the hospital's grounds that the nursing school leases from the hospital could lead to a determination that instruction is not taking place at the hospital because the leased building is not part of the licensed hospital facility.

Response: If the leased building were on the hospital grounds, the requirement that all instruction is provided at, or on the immediate grounds of, the hospital would be met. To clarify the point for this commenter, if a nursing school leases a building on the hospital grounds to be used for classroom instruction of nursing students, we would consider the instruction to be taking place on the immediate grounds of the hospital. The hospital's capital-related and operating costs associated with the leased building are reduced by the amount of lease income.

In summary, for hospital cost reporting periods beginning on and after December 19, 1989, a hospital may claim as pass-through costs the costs incurred in training students from a nursing school that meet all of the following four criteria:

(i) The hospital incurs at least 50 percent of the net costs, that is, the costs after a deduction of tuition revenues incurred for classroom and clinical training provided to students enrolled in an approved nursing education program at the hospital-based nursing school. This would include programs in both professional and practical nursing that are approved by the appropriate approving body under § 413.85(e).

(ii) At least 50 percent of the board of directors with fewer members (either the hospital or the nursing school) or 4 members, whichever results in a smaller number, are also members of the board of the other entity, regardless of the number of members of the larger board.

(iii) All instruction is provided at, or on the immediate grounds of, the hospital. In instances where the hospital campus is contiguous to, or within, the campus of an educational institution, this criterion will be considered to be met only if the instruction is provided at the hospital.

(iv) The preceding three criteria were met on June 15, 1989, and have been met continuously since that date.

D. Payments for Hemophilia Inpatients (§ 412.115)

Hemophilia, a blood disorder characterized by prolonged coagulation time, is caused by an inherited deficiency of a factor in plasma necessary for blood to clot. Hemophilia is considered to encompass the following conditions: Factor VIII deficiency (classical hemophilia); Factor IX deficiency (also termed plasma

thromboplastin component (PTC) or Christmas factor deficiency); and Von Willebrand's disease. The most common factors required by hemophiliacs to increase coagulation are Factor VIII and Factor IX; a small number of hemophiliacs have developed inhibitors to these factors and require special treatment.

In late 1989, ProPAC completed a study entitled "The Adequacy of Prospective Payment for Medicare Beneficiaries with Hemophilia." ProPAC determined that hemophilia patients were distributed across several DRGs and that patients with hemophilia had higher inpatient operating costs than other patients. However, while payments under the prospective payment system for these cases were slightly higher, the relative payment to cost ratios were lower. On October 2, 1989, ProPAC recommended to Congress implementation of a prospectively determined add-on payment for patients requiring the clotting factor, and that this payment should be determined on a per unit basis, based on a weighted average of the types of clotting factor available.

In response to ProPAC's recommendations and growing concern about increasing hospital costs for treating hemophiliacs, Congress enacted section 6011 of Public Law 101-239. That section amended section 1886(a)(4) of the Act to provide that prospective payment hospitals receive an additional payment for the costs of administering blood clotting factor to hemophiliacs who are hospital inpatients. The payment is to be based on a predetermined price per unit of the clotting factor multiplied by the number of units provided. Under section 1886(a)(4) of the Act, this add-on payment is effective for blood clotting factor furnished on or after June 19, 1990 and before December 19, 1991. In addition, section 6011 of Public Law 101-239, requires HCFA and ProPAC to develop and submit to Congress recommendations on how to pay for blood clotting factor. These recommendations are due not later than June 19, 1991.

We established a price per unit of clotting factor based on the latest (1990) price listing available from the Drug Topics Red Book, the publication of pharmaceutical average wholesale prices. We set three separate add-on amounts, one for each of the three basic types of clotting factor because a comparison of the wholesale prices for the different types of clotting factor (that is, Factor VIII, Factor IX, and the other factors which are given to those patients with inhibitors to Factors VIII and IX (designated as Anti-inhibitors in this document)) reveals great variations among the three types. The Factor IX products are priced much lower than the Factor VIII products, and the special Anti-inhibitor factors are priced higher than both of the other factors. Therefore, we determined that it is more equitable to set an add-on payment amount for each type of blood clotting factor.

The add-on payment amount for each of the three types of factor was based on the median average wholesale price of the several products available in that category of factor. However, since we are aware that hospitals are generally able to negotiate direct selling prices with the various drug companies that are lower than the wholesale prices listed in the Drug Topics Red Book, we discounted the average wholesale prices by 15 percent before calculating the median price. This 15 percent discount was based on the results of a study conducted by the Department's Office of Inspector General (OIG) entitled "Use of Average Wholesale Prices in Reimbursing Pharmacies Participating in Medicaid and the Medicare Prescription Drug Program" (Report No. A-06-89-00037, October 3, 1989). The OIG determined that the average wholesale price of a drug is heavily discounted in direct sales and that current data show that this discount averages 15.5 percent. In addition, the OIG report states that the average wholesale price is not a meaningful payment level, and it should not be used for making payment for drugs under Medicare.

Based on information from industry representatives, we believe that the cloting factors are generally available to hospitals at or below the add-on payment amounts that we established for the three types of blood clotting factors, which are as follows:

Factor VIII—$.64 per unit
Factor IX—$.26 per unit
Other Hemophilia Clotting Factors (for example, Anti-inhibitors)—$1.00 per unit

We recognize that the products available, and their costs, are changing rapidly, with new products entering the market and existing products being discontinued. Since the market share of various products can shift dramatically within a short period of time, we believe the median price is preferable to a weighted average. In the April 20, 1990 final rule with comment, we stated that we recognize that changes in the clotting factor market may require re-evaluation of the add-on payment amount before the final rule setting forth the FY 1991 prospective payment rates is issued.

We have developed specific codes to identify the three types of factor. These codes must be included in the bill submitted by the hospital in order to receive the add-on payment. Instructions were issued to Medicare intermediaries explaining the codes and how to use them (Transmittal No. 1486, August 1990). These codes serve to identify the causes requiring payment for the clotting factor and also permit the accumulation of data over time. The data will be evaluated in determining future payment alternatives.

Comment: A manufacturer of blood clotting factors for hemophilia patients wrote to inform us about a newly developed purified Factor IX. This product is currently in the process of being approved by the Food and Drug Administration (FDA). The manufacturer recommended that purified Factor IX concentrates be classified with blood clotting factor products categorized as "Other" and reimbursed at $1.00 per unit, as this amount more closely approximates their production cost than the $.26 per unit allowed for other Factor IX products.

Response: At this time, the purified factor IX referred to by the commenter is still in the process of being approved by the FDA. Until approval is final, the product will not be licensed and no price will be assigned to it. As noted above, we stated in the April 20, 1990 final rule with comment period that if any new products were approved before publication of the FY 1991 prospective payment system final rule we would recalculate the add-on payment amount for blood clotting factors administered to hemophilia patients. However, since the approval process for this new Factor IX product is still in process, no unit price has been assigned and we will not be able to include it in any category at this time, nor will we revise any of the add-on amounts.

When this factor does receive final approval by the FDA, it will be assigned to the appropriate category for payment as will any other new FDA-approved blood clotting product. We will reassess the prices per unit for each of the blood clotting factors and any other appropriate issues as part of the proposed rule for FY 1992 prospective payment system changes.

Comment: One commenter objected to the application of a 15 percent discount to the price per unit for blood clotting factors administered to Medicare hemophilia inpatients. The commenter stated that this Medicare reduction was for the purpose of taking into account either incentive discounts or volume discounts granted by manufacturers to

the hospitals. However, because of the small volume of blood clotting factor purchased by any one hospital, manufacturers' incentive discounts and volume discounts do not apply. Therefore, the commenter asserts that hospitals cannot be expected to negotiate discounts for these blood clotting factors as they could for other types of drugs and that in setting the add-on payment amount per unit of blood clotting factor, the 15 percent discount should be eliminated.

Response: Although the volume of hemophiliacs who are hospital inpatients is not of the magnitude of a variety of other hosptial inpatient conditions requiring pharmaceutical drugs, utilization of blood clotting factors is concentrated in certain hospitals. Comprehensive hemophilia treatment centers administer the majority of these factors. Since we believe that the intention of Congress in including this special blood clotting factor payment provision in section 6011 of Public Law 101-239 was to protect from large losses those hospitals that specialize in treating hemophilia patients and purchased substantial amounts of clotting factor, we conclude that it is not inappropriate to incorporate a 15 percent discount in setting the price of clotting factor.

We also note that, prior to deciding on the per unit payment to be added on for blood clotting factors administered to hemophilia inpatients, we conducted extensive consultation with experts in the field, including information on price availability. Based on the results of these consultations, we are confident that the payment rates established are adequate and equitable.

E. Ceiling on Rate of Hospital Cost Increases

Section 101 of the Tax Equity and Fiscal Responsibility Act of 1982 (Pub. L. 97-248) added section 1886 to the Act to establish a ceiling on the allowable rate of the increase for hospital inpatient operating costs. This ceiling still applies to hospitals and units excluded from the prospective payment system. Excluded hospital and hospital units under section 1886(d)(1)(B) of the Act include psychiatric, rehabilitation, children's, cancer, and long-term hospitals, and psychiatric and rehabilitation distinct-part units of acute care hospitals. (Prior to FY 1988, alcohol/drug hospitals and distinct-part units were also excluded from the prospective payment system, but are now under the prospective payment system.)

These excluded hospitals and units receive payment for the inpatient nospital services they furnish on the basis of reasonable cost up to a ceiling. Under the rate of increase limits, an annual target amount (stated as inpatient operating cost per discharge) is set for each hospital, based on the hospital's own cost experience in its base year. This target amount is applied as a ceiling on the allowable costs per discharge for the hospital's next cost reporting period.

A hospital that has inpatient operating costs per discharge in excess of its target amount would be paid no more than that amount. However, a hospital that has inpatient operating costs less than its target amount would be paid its costs plus the lower of:

(1) 50 percent of the difference between the inpatient operating cost per discharge and the target amount; or

(2) 5 percent of the target amount.

Each hospital's target amount is adjusted annually, before the beginning of its cost reporting period, by an applicable target rate percentage for the 12-month period. The rate of increase limit is based on an assumption that a provider's year-to-year inpatient operating costs should remain comparable to its base year, except for inflation. Section 1886(b)(4)(A) of the Act gives the Secretary the authority to grant an exemption from, or an adjustment or exception to, the rate of increase limit where events beyond the hospital's control or extraordinary circumstances create a distortion in the increase in costs.

Section 6015 of the Omnibus Budget Reconciliation Act of 1989 (Pub. L. 101-239) amended the adjustment authority contained in section 1986(b)(4)(A) of the Act to provide that a hospital or excluded unit may be assigned a new base year in lieu of adjustments to the existing target amount. Thus, the assignment of a new base period is another mechanism HCFA may use, when appropriate, in determining the payment amount to an excluded hospital that has exceeded its ceiling in a cost reporting period. Section 6015 of Public Law 101-239 requires the Secretary to publish instructions that set forth the application process under which hospitals may request target rate exemptions and adjustments.

1. Base Period

Section 1886(b)(3) of the Act provides for the use of a particular 12-month cost reporting period as the base period that serves as the basis for future periods' target amount after updating by the applicable percentage increase. The base period is the first cost reporting period of the excluded hospital or unit beginning before the period for which section 1886(b) of the Act applies.

Section 1886(b)(5) of the Act gives the Secretary the authority to determine the applicable 12-month period to use as the base period for excluded hospitals or hospital units that have a cost reporting period that is other than 12 months in duration. This policy is set forth in regulations at § 413.40(b)

A hospital's fiscal intermediary calculates the target amount by dividing the Medicare allowable inpatient operating costs, as defined under section 1886(a)(4) of the Act, by the number of Medicare discharges in the base year cost reporting period. A hospital could incur costs that exceed its ceiling due to extraordinary circumstances such as flood, fire, earthquake or similar unusual occurrences, or some other factor that has caused a distortion in the comparison of the base year and the applicable cost reporting period. Under section 1886(b)(4)(A) of the Act, the Secretary can provide for a exception or adjustment to the hospital's ceiling in such circumstances. Section 413.40(f) of the regulations implement section 1886(b)(4) of the Act regarding exemptions, adjustments and exceptions to the target rate of increse limit. The regulations provide that HCFA may adjust a hospital's operating costs considered in establishing cost per case, including both periods subject to the limit and the hospital's base periods, to take into account—

- Unusual costs due to extraordinary circumstances beyond the provider's control;
- Distortions in costs caused by a change in case mix as a result of the addition or discontinuation of services; or
- Factors such as a change in the inpatient hospital services that a hospital provides that could result in a significant distortion in the operating costs of inpatient hospital services.

The adjustment may be made only if the hospital exceeds its limit for the cost reporting period and only to the extent the hospital's costs are reasonable, attributable to circumstances specified above, and verified by the intermediary.

The exceptions or adjustments we make to a hospital's target amount are most commonly for a particular problem in one cost reporting period, such as a hospital experiencing an increase in its Medicare average length of stay relative to its base year. This increase could cause a distortion in the comparison to its base year since the limit is calculated on a per discharge basis. If a hospital whose costs exceed the limit demonstrates that its increased costs are attributable to an average length of stay increase and that its costs are

reasonable, we adjust the limit to recognize the increase in average length of stay over the base period.

In some situations, a permanent adjustment is made to a hospital's target amount, such as when a hospital adds a new and substantially different service. Such an addition would create the need for additional staff and also could result in treating a different kind of patient. However, only those costs associated with the addition of a new service would be included in the permanent adjustment made to the provider's rate-of-increase limit.

2. Assignment of a New Base Period

Section 6015(a) of Public Law 101–239 amended section 1886(b)(4)(A) of the Act to give the Secretary authority to assign a new base period to a hospital if it is more representative of the reasonable and necessary costs of its inpatient services. In the April 20, 1990 final rule with comment period (at 55 FR 15157), we provided that we would authorize the assignment of a new base period only under limited circumstances and only when an adjustment cannot be accomplished through other provisions as discussed above. In order to justify the assignment of a new base period, a hospital must have a permanent, substantial, and significant change in the nature of services provided that results in costs exceeding its rate-of-increase limit. An example of such a change would be a psychiatric institution that previously had only provided limited care to its patient population and then had changed the entire focus of its work to providing a comprehensive range of psychiatric services to its patients.

However, should a hospital experience a significant change in patient care services and its costs exceed the rate-of-increase limit, the remedy will not automatically be the assignment of a new base period. A general increase in costs beyond the limit is not grounds for rebasing. As discussed above, if a hospital adds a new service that results in increased costs, a permanent adjustment may be made to the hospital's limit to alleviate the distortion created by the new service and total rebasing would not be warranted.

Another situation that could occur is that the hospital may have significantly changed its patient care services but all the costs incurred above the ceiling may not be reasonable and necessary. One area we give particular attention to in this respect is indirect costs (for example, administrative and general costs, and operation of plant.) The increases in indirect costs are often the result of factors that are not directly related to patient services; therefore, any excessive increases are not included in any adjustments and would not be included if the assignment of a new base period were approved. Rather, we expect cases of this nature to result in a rebasing of direct patient care costs only.

Comment: We received a number of comments from national associations representing hospitals that are subject to the rate-of-increase limits, State hospital associations, and a State Department of Human Services that believe that the April 20, 1990 final rule with comment period is too restrictive in setting forth the conditions under which we would approve the assignment of a new base period. Most of the commenters believe that our interpretation of the rebasing provision is inconsistent with Congressional intent. They construed the provision as broadening our authority to permit rebasing whenever a hospital demonstrates that its costs in a new base year are reasonable and necessary and more representative of current services than those in the original base year. They generally recommended that we authorize rebasing for a much wider variety of circumstances. One commenter believes that Congress provided the new authority because the current adjustment policy is too narrow and that rebasing should be used to mitigate the financial harm to hospitals that are paid under a system that was considered temporary when enacted 8 years ago. Other commenters asserted that rebasing should be allowed when the annual update factor has proved inadequate to cover the actual increase in a hospital's costs for the cost components that it is designed to cover.

Response: We agree that the rule is restrictive in setting out the circumstances under which rebasing would be allowed. We do not agree, however, that our interpretation is contrary to Congressional intent. First, nothing in the statute or legislative history suggests that Congress intended us to implement this provision with broad and general criteria that would permit the widespread assignment of new base periods. In addition, we find significant the minimal cost attached to the rebasing provision by the Congressional Budget Office at the time of enactment. If general rebasing had been intended, the cost estimate would have been significantly higher. Finally, we believe it is more consistent with the policies underlying the rate-of-increase limits to view the rebasing provision as being simply an enhancement to the current exception and adjustment process that can be resorted to when the existing process proves inadequate to address a distortion in a hospital's base period or rate of increase.

The broad interpretation of section 1886(b)(4)(A) of the Act advocated by the commenters would have the effect of substantially revamping the payment methodology for excluded hospitals. It is evident that the commenters see the rebasing option as a means of alleviating difficulties caused by the inability of many hospitals to remain within their target limits. However, the commenters' view of the provision would put it at odds with the basic premise of the rate-of-increase limitation, which is to hold hospitals to the annual rate of increase except when events beyond a hospital's control or extraordinary circumstances warrant an adjustment. It would be unlikely for Congress to make a major change in the rate-of-increase methodology without providing a clear statement of that intent. Moreover, Congress has requested a report on alternative payment methodologies for excluded hospitals, due October 1, 1990. It would be incongruous to believe Congress intended that we authorize a general rebasing, which would be tantamount to a major revision in payment methodology, while simultaneously requesting recommendations on alternative payment methodologies.

Therefore, this provision will remain unchanged in granting the assignment of a new base year in those limited circumstances in which a hospital demonstrates that there has been a permanent, significant, and substantial change in the nature of services provided that results in costs exceeding its target amount. Typically, the rebasing provision will apply in situations in which there has been a significant change in patient services such as that associated with a major expansion or change in the type of programs provided by an excluded hospital or unit, a change of ownership, or where significant cost increases have incurred in order to meet certification or accreditation needs. These are situations involving broad, substantial changes that cannot be adequately accounted for under the more targeted exceptions and adjustments process.

Comment: In arguing for a broader interpretation of the rebasing provision, commenters mentioned numerous factors that they believe were not addressed by the annual update factor. It was their contention that since the update factor did not adequately reflect the costs incurred by hospitals in various circumstances, Congress

authorized rebasing as a means of compensating for these costs. The factors mentioned were: new technology, union contracts, employee benefit costs, food service, competition for competent personnel, case-mix changes, service intensity increases, and a lower base year average length of stay than in subsequent years.

Response: The current exception and adjustment process accommodates changes from the base year in average length of stay and service intensity. As far as the other factors are concerned, they are accommodated by the annual update factor. We do not believe that Congress authorized rebasing under the exceptions and adjustments authority under section 1886(b)(4)(A) of the Act as a means of subsidizing hospitals that have been confronted with some of the factors listed by the commenters and were unable to address them within their target limitation. One of the assumptions behind limiting costs to a predetermined ceiling is that if a hospital needed to increase cost in one area beyond the average amount provided by the update factor, cost containment measures would be exercised in other areas.

Comment. One commenter claimed that the conditions set forth for rebasing further cloud the confusing set of existing criteria for exceptions and adjustments. The commenter indicated that the distinctions among the three mechanisms are difficult for hospitals to understand and that the documentation required for each of them is not clear. The commenter suggested that we set out which circumstances warrant which kind of relief and that the application process provide that if rebasing was not justified, the same application could then be used for considering a more limited adjustment to the target rate of increase. The commenter also objected that hospitals are required to apply year after year for relief when the same circumstances persist indefinitely.

Response: The regulations implementing the provision are found at § 413.40. The bases for relief under § 413.40 are as follows:

• New Provider Exemption (§ 413.40(f))

A new hospital may receive an exemption from the rate-of-increase limits until the end of the first cost reporting period beginning at least 2 years after the hospital accepts its first patient.

• Exceptions and Adjustments (§ 413.40(g) and § 413.40(h))

An exception or adjustment may be granted only for a cost reporting period in which the target amount is exceeded and only when the costs in excess of the target amount are reasonable and justified. The adjusted target amount may not exceed the hospital's actual cost per discharge for that cost reporting period. Under § 413.40(g), an exception may be granted for extraordinary circumstances or a change in case mix. Extraordinary circumstances are events such as earthquake, fire, flood, strike, or other unusual circumstances beyond a hospital's control that cause the hospital to incur excessive costs. The exception for case mix was originally established when acute care hospitals were also subject to the rate-of-increase limit. Since there is no good measurement of case mix for most types of hospitals that are excluded from the prospective payment system, any increases in costs resulting from a change in the mix of patients must be documented; evidence of a change in patient mix without supporting documentation as to how the change affected specific costs is not sufficient to support an adjustment under § 413.40(g).

The most common adjustment to the target amount is to correct for cost distortions between the base year and the year the target amount is applied under § 413.40(h). The premise of the rate-of-increase limit is that a hospital's year-to-year costs should remain comparable to the base year unless significant changes occur in services or patient population. If there are significant changes during the course of a cost reporting period that create a cost distortion in comparison to the base year, an adjustment will be made to remove the effects of the distortion. There are a variety of factors that could create distortions and result in the noncomparability of cost reporting periods; however, in order for HCFA to approve an adjustment, these factors must be linked to direct patient care services and their impact on operating costs per case must be explicitly documented. We approve an adjustment for only a particular cost reporting period if the circumstances creating the cost distortion are temporary or prone to fluctuation from year to year, such as a change in average length of stay. If the change is permanent, such as the addition or deletion of a service, a permanent adjustment is made to the target amount.

• Assignment of a New Base Period (§ 413.40(j)).

Effective with cost reporting period beginning on or after April 1, 1990, a new base period will be assigned to address substantial and permanent changes in patient care services that are so broad in nature that the resulting cost distortion cannot be adequately addressed through the more targeted excepted and adjustments available under 413.40(g) and 413.40(h). As is the case with an exception or adjustment, rebasing will be authorized only if the hospital's operating costs per discharge are in excess of its target amount.

• Medicare Catastrophic Coverage Act of 1988 (§ 413.40(i)).

As explained in greater detail in section II.F of the preamble of this document, below, the intermediary is authorized to revise the target amount to take into account the effects of expanded inpatient hospital benefits under catastrophic coverage. Unlike other adjustments to the target amount, the adjustment is not contingent on whether the hospital's operating costs per discharge exceed its target amount. An adjustment under § 413.40(i) does not preclude an additional adjustment under 413.40(h) for an increase in average length of stay.

A hospital's request for an exemption or revision in its target amount must be made to its fiscal intermediary no later than 180 days from the date on the intermediary's notice of program reimbursement. The hospital's request must indicate the type of relief being requested, provide justification and documentation supporting the request, and, in the case of requests for an exception, adjustment or rebasing, explain any significant cost increases since the base period. The intermediary has the authority to revise the target amount under § 413.40(i) for the effects of the Medicare Catastrophic Coverage Act of 1988. On all other requests, the intermediary makes a recommendation to HCFA, which makes the decision.

We will soon be issuing instructions to be included in the Provider Reimbursement Manual (HIM-15-1) that provide more detailed guidelines for making applications for exemptions, exceptions, and adjustments. These instructions will elaborate on the circumstances applicable to the various bases for relief available under § 413.40 and the application process. As suggested by the commenter, the instructions will indicate that the same application may be used to request relief under more than one provision.

Comment: One commenter found the April 20 final rule with comment inconsistent with current practice that gives the Medicare fiscal intermediary authority to calculate target rates and target rate adjustments. The commenter asserted that the authority to assign new base periods should remain with the fiscal intermediaries due to their

familiarity with the hospitals' circumstances and because it would result in more timely and possibly less biased decisions if our budgetary restraints were removed from the decision process.

Response: Section 1886(b)(4)(A) of the Act gives the Secretary authority to assign a new base year under his general exception and adjustment authority that applies to the target rate of increase provision. The fiscal intermediaries make recommendations on requests for exceptions and adjustments under §§ 413.40(g) and 413.40(h) and will do so on new base year requests under § 413.40(j). The final authority for approval of these requests is with HCFA, acting for the Secretary.

The commenter appears to have confused §§ 413.40(g) and 413.40(h) with § 413.40(i). Under § 413.40(i), the fiscal intermediary does have the authority to make target rate calculations and adjustments for the provisions of Public Law 100-360. This authority, however, pertains only to § 413.40(i) and is specific to the circumstances set forth under Public Law 100-360.

Comment: The majority of the commenters on the rebasing provision were critical of what they thought was our position in the April 20, 1990 final rule with comment period not to recognize indirect costs in the rebasing calculation. Several of these commenters objected to what they thought was our characterization of indirect costs as unnecessary and unreasonable. The commenters strongly urged that we should include the same kinds of costs in the rebasing calculation as were recognized in the original base year target rate calculation, including reasonable and necessary indirect costs.

Response: In the preamble discussion on the rebasing provision, we indicated that increases in indirect costs often result from factors that are not directly related to patient care and, therefore, would not be included in any adjustment if the assignment of a new base period were approved. Our intention was to emphasize that any adjustment for indirect costs increases above the target rate of increase limitation would be limited to those increases that resulted from significant changes in patient care services. We did not intend to imply that no increases in indirect costs would be recognized. We would recognize without additional justification increases in allowable indirect costs equivalent to the percentage increase in the target rate. However, if the allowable indirect costs increase at a higher rate than the target rate percentage increase, we would not include the additional indirect costs in the target rate adjustment unless the hospital documents that they are directly related to a significant change in the patient care services.

F. Medicare Catastrophic Coverage Repeal Act of 1989

1. Medicare Catastrophic Coverage Act of 1988

After publication of a May 27, 1988 proposed rule concerning changes to the inpatient hospital prospective payment system and FY 1989 rates, on July 1, 1988, Public Law 100-360 was enacted. Under section 101(2) of 100-360, essentially unlimited inpatient hospital days were made available for Medicare beneficiaries (except for the inpatient psychiatric day limitation) effective for services furnished on or after January 1, 1989. Before enactment of Public Law 100-360, a beneficiary was entitled to 90 days of inpatient hospital services during each spell of illness. In addition, a beneficiary could draw from a lifetime reserve of 60 days if that beneficiary's inpatient hospital days exceeded 90 days in a spell of illness. Under that system, a hospital could bill the beneficiary or the beneficiary's third party insurer for inpatient hospital services furnished to a beneficiary whose inpatient hospital benefits were exhausted.

Hospitals and hospital associations expressed concern to Congress that they would be financially disadvantaged by not being permitted to bill beneficiaries or their third party insurers for inpatient hospital services that, before enactment of Public Law 100-360, were not covered because beneficiaries had exhausted their inpatient hospital benefits. Therefore, Public Law 100-360 required the Secretary to take into consideration reductions in payments by Medicare beneficiaries to prospective payment hospitals due to the elimination of a day limitation on inpatient hospital services caused by the provisions of section 101 of Public Law 100-360 when establishing the prospective payment rates, outlier thresholds, and diagnosis related group (DRG) weighting factors for FY 1989. In addition, section 104(c)(2) of Public Law 100-360 required the Secretary, when increasing the target amounts for hospitals excluded from the prospective payment system, to take into consideration on a hospital-specific basis, the same reduction in payments to excluded hospitals for cost reporting periods beginning on or after October 1, 1988.

2. The September 30, 1988 Final Rule

On September 30, 1988, we published the final rule (53 FR 38476) on changes to the inpatient hospital prospective payment system and FY 1989 rates. In that rule, we implemented the provisions of Public Law 100-360, pertaining to the adjustment in the prospective payment system and in the rate-of-increase limit to take into account the impact of catastrophic coverage. We requested public comment on those changes.

We determined that the prospective payment system would automatically adjust to the expansion of inpatient hospital benefits as increased payments would occur automatically as DRG payments were made for entire stays, including outlier portion thereof, that previously would not have been covered. Therefore, we concluded no explicit adjustments were necessary.

With respect to the adjustment in the rate-of-increase limit, we provided in the September 30, 1988 final rule that hospitals and hospital units excluded from the prospective payment system may apply for increases to their target rates to correct any distortion due to higher costs caused by the expansion of inpatient hospital benefits due to the provisions of section 101 of Public Law 100-360. We provided for the adjustment under section 104(c)(2) of Public Law 100-360 to be available to any hospital that experiences a distortion due to increased costs caused by elimination of the inpatient coverage limitation, whether or not the hospital actually exceeds its target rate. This is because any distortion would be due to the effect of section 101 of Public Law 100-360 and would be essentially unrelated to the actions of any individual hospital—it is a circumstance that could potentially affect all hospitals to some degree. We provided that a hospital may request a target amount adjustment directly from its intermediary. The target amount would be adjusted for the impact of any reduction in Medicare payments that the hospital experienced because of the previous inpatient day benefit limitation. The adjustment would be based on the estimated incremental costs of care historically furnished to Medicare beneficiaries after they had exhausted benefits during an inpatient stay.

We provided that a hospital may request an adjustment from its intermediary after the effective date of the September 30, 1988 final rule (that is, October 1, 1988) but no later than 180 days after the closing date of the hospital's first cost reporting period beginning on or after October 1, 1988. In order for its request to be considered, we provided that a hospital must submit a written request for an adjustment to its target amount under authority of this

provision along with the following supporting documentation:

• A statement from the hospital stating whether the adjustment is to be based on its historical experience in its base period or its last cost reporting period beginning before October 1, 1988. (If this period is not of at least 12 months in duration, multiple consecutive cost reporting periods comprising at least 12 months must be used.)

• Billing data for the period that serves as the basis for the adjustment documenting the following:

—The number of hospital inpatient days furnished to Medicare beneficiaries for which no payment was made because the beneficiary had exhausted Part A hospital benefits. (Excluded from the count are days for stays that were not covered in their entirety, since such stays will be paid as discharges after January 1, 1989.)

—The ancillary charges for services furnished on the days after the beneficiary had exhausted Part A hospital benefits, as counted above.

Upon receipt of a request for an adjustment by a hospital that includes the required information, the intermediary will verify the data, submitted by the hospital regarding beneficiary status and exhaustion of inpatient hospital entitlement. (Medical necessity of acute care for inpatient days following exhaustion of entitlement would be assumed.)

In order to adjust the target amount, the intermediary will—

• Estimate the total inpatient operating costs for services furnished to Medicare beneficiaries, including the costs of services furnished after a beneficiary had exhausted benefits;

• Take the ratio of the above-determined costs to the Medicare allowable inpatient operating costs for the period from which the hospital's data are derived; and

• Apply this ratio to the otherwise applicable target amount for cost reporting periods beginning on or after October 1, 1988.

We indicated that the intermediary will determine the amount of any appropriate adjustment and notify the hospital of its determination within 90 days of the date of receipt of the request.

3. The Family Support Act of 1988

Subsequent to the publication of the September 30, 1988 final rule, the Family Support Act of 1988 (Pub. L. 100–485) was enacted on October 13, 1988. Section 608(d) of Public Law 100–485 made several technical corrections to Public Law 100–360, including the following changes concerning provisions of Public Law 100–360 implemented in the September 30, 1988 final rule:

• Section 608(d)(3)(D) of Public Law 100–485 revised section 104(c)(2) of Public Law 100–360 to change the date for implementing the target rate adjustments from cost reporting periods that begin on or after October 1, 1988 to portions of cost reporting periods occurring on or after January 1, 1989.

• Section 608(d)(3)(E) of Public Law 100–485 revised section 104(c)(2) of Public Law 100–360 to specifically provide that an adjustment for any distortion due to higher costs caused by the expansion of inpatient hospital benefits is to be made whether or not a hospital or unit actually exceeded its target rate.

4. The Medicare Catastrophic Coverage Repeal Act of 1989 and the April 20, 1990 Final Rule With Comment

The Medicare Catastrophic Coverage Repeal Act (Pub. L. 101–234) was enacted on December 13, 1989. Under section 101(c) of Public Law 101–234, any adjustment in payments to hospitals under the prospective payment system as provided for in section 104(c)(1) of Public Law 100–360 ended effective with discharges occurring on or after January 1, 1990. Under section 101(c)(2)(A)(i) of Public Law 101–234, the adjustment to the target rates for hospitals excluded from the prospective payment system, as provided for in section 104(c)(2) of Public Law 100–360, was eliminated effective with portions of cost reporting periods occurring on or after January 1, 1990. In addition, section 101(c)(2)(A)(ii) of Public Law 101–234 added clarification that in making any adjustment under section 104(c)(2) of Public Law 100–360, the adjustments to hospital target rates must be made disregarding whether a beneficiary had exhausted his or her Medicare benefits prior to January 1, 1989.

In the April 20, 1990 final rule with comment that also implemented several provisions of Public Law 101–239 concerning mid-year changes to the prospective payment system, we took into account the provisions of section 104(c)(2) of Public Law 100–360 as amended by section 608(d) of Public Law 100–485 and by sections 101 (c) and (d) of Public Law 101–234 concerning the temporary elimination of the day limitation on inpatient hospital services.

In addition, we requested comment on the transition provisions of Public Law 101–234 that went into effect on January 1, 1990 and that were included in the April 20, 1990 final rule with comment.

We received no comments concerning the adjustments to prospective payments under Public Law 101–234. We have received 16 items of correspondence containing comments concerning the application of the transition provisions for target rate adjustments under Public Law 100–360.

Comment: A commenter suggested that an extension of the 180–day period for hospitals to file for an adjustment to their target rate under § 413.40(i) is needed since the information hospitals must provide with their application has been changed slightly by the April 20 final rule with comment.

Response: We do not believe that hospitals require an additional 180 days to secure the minor changes in data required by the April 20, 1990 final rule. Moreover, once a hospital has filed for an adjustment under § 413.40(i), the hospital still has an opportunity to furnish additional information. Adjudication by the Medicare fiscal intermediary would not take place until the hospital has adequate time to secure any additional data. This has been the case with all exception requests since the hospital cost limits were originally imposed.

Comment: Due to cash flow problems, several commenters suggested that if a cost report is filed by a hospital requesting a target amount adjustment (particularly if the hospital is seeking relief under § 413.40(i)), repayment of any amount owed by the hospital for the cost reporting period should be deferred until the adjustment request is adjudicated.

Response: Delaying repayment of amounts owed by providers at the time of cost report filing would be inappropriate in light of requirements imposed by the Federal Claims Collection Act and the appeals process under section 1878 of the Act and § 405.1803 of the regulations. Neither would it be an appropriate practice to allow automatic delay of cost report filing requirements beyond the 90 days already allowed after the close of the cost reporting period under § 413.24(f)(2). Due to the unique nature of Public Law 101–234, we provided special time-limited procedures to allow immediate interim payment rate adjustments and delays in filing cost reports for the periods affected by catastrophic coverage. We believe our temporary procedural changes adequately addressed this one-time problem. No ongoing changes to the process for target rate revisions under § 413.40 is called for based on current program experience since a hospital can request an adjustment in its target amount and interim rate before the cost report is due as long as the hospital

provides adequate cost data and analysis for the affected period.

Comment: A commenter suggested that some long-term care hospitals experience an annual crisis due to the current regulatory requirements to determine non-catastrophic adjustment requests on an annual basis, to base approval of such requests on whether costs exceed the target rate, and to process those requests separately from catastrophic adjustment requests.

Response: Unless the circumstances giving rise to the exception or adjustment are permanent, we grant only a one year adjustment to the target amount. As we have advised in responding to comments on previous changes in adjustment and exceptions policies, we do not believe that it is the intent of the statute to create incentive payment situations in determining the amount of an adjustment to which a hospital may be eligible. We have found that the circumstances that cause hospitals to exceed their target amount vary significantly from year-to-year. As a result, an adjustment granted in one year are often not applicable in subsequent cost reporting periods. If we were to revise permanently the target amount for temporary cost distortions or circumstances that result in fluctuating costs from year-to-year, we would create the potential for inappropriate incentive payments. However, we frequently direct intermediaries to make interim payment and subsequent year adjustments to the target amount without further HCFA involvement as long as the circumstances occurring in the subsequent period are comparable to those giving rise to the initial adjustment.

We note that the conditions established by statute for an adjustment for the effects of Medicare catastrophic coverage changes are not comparable to the conditions under which other exceptions to the target amounts are granted. The catastrophic adjustment is granted without regard to whether the hospital exceeds its target amount. Recognizing the impact of the catastrophic coverage provision on long-term care hospitals and other hospitals with long stay cases, we have taken many procedural steps to alleviate their cash flow difficulties. We issued instructions to Medicare fiscal intermediaries that initiated parallel processing of catastrophic and other exception adjustment requests. We temporarily extended cost reporting submission dates. We provided instructions to allow submission of preliminary data to make interim adjustment determinations in order to reduce or eliminate provider repayments on tentative settlement of cost reports.

We do not believe that the process for exceptions and adjustments need further revision. In addition, with repeal of Public Law 100-360 these commenters concerns will be substantively resolved in the future.

Comment: One commenter objected to an implied requirement to count discharges for patients who had exhausted Part A benefits in a cost reporting period other than the one used for adjustment under § 413.40(i).

Response: Depending on the year involved, we have found that hospitals may have recorded discharges for Medicare purposes either at the time of Part A exhaustion or at actual physical discharge from the hospital. This inconsistency occurred due to the fact that billing instructions for Part A discharges from acute care hospitals were revised in 1984 to conform to prospective payment system requirements. However, the policy applicable at all times to excluded hospitals and units is to record the discharge at the time the patient physically leaves the facility. For purposes of determining discharges in the year used to determine the catastrophic adjustment, a discharge should be recorded only at the time a beneficiary was physically discharged from the facility. For patients who exhausted Part A benefits in a cost reporting period other than the one used for the catastrophic adjustment, a discharge will be counted if the patient was physically discharged during the adjustment cost reporting period. If the discharge was properly recorded for that year, a second discharge would not be counted in determining the adjustment.

Comment: One commenter alleged that we were applying an unwritten policy of requiring beneficiaries to use all lifetime reserve days for purposes of determining the point at which days after exhaustion of benefits could be counted for use in making the adjustment under § 413.40(i).

Response: The Medicare program has had longstanding rules at § 409.65 regarding the use of lifetime reserve days when a beneficiary has exhausted the 90 regular benefit days of inpatient hospital service. Those rules require that beneficiaries or their legal representatives file a statement of election not to use such days. Only in the case in which a hospital's average daily charge is equal to or less than the applicable coinsurance amount can an election not to use the lifetime reserve days available be considered automatic, or deemed, without the filing of an election statement.

Medicare fiscal intermediaries have found that some hospitals requesting an adjustment under § 413.40(i) have not been able to document for the benefits exhausted cases used to determine the amount of the adjustment either that the beneficiary elected not to use his or her lifetime reserve days or that the average daily charge was less than the coinsurance amount. As a result, a determination must be made regarding whether the available lifetime reserve days should have been utilized in these cases. The adjustment must include only those costs for which Medicare additional days of care would be paid for under catastrophic coverage rules that would not have been payable in the absence of catastrophic coverage. We have not applied an unwritten policy in determining the days after exhaustion of benefits in making the catastrophic adjustment to the target rates. However, we are holding in abeyance adjustments for days that potentially could have been lifetime reserve days pending the intermediary's determination that the hospital properly ended Medicare coverage for beneficiaries when lifetime reserve days may have been available.

We are currently investigating whether these hospitals correctly applied the provisions of § 409.65 in not billing Medicare for inpatient days which could have been covered as lifetime reserve days. If the days should have been billed as lifetime reserve days, the number of inpatient days after exhaustion of Part A benefits that are used to determine the additional days of care that would be covered under the catastrophic provision would be reduced. We have asked the fiscal intermediaries to review each hospital's request for a catastrophic adjustment using the appropriate criteria in § 409.65 to determine the appropriate treatment of potential lifetime reserve days. Unless the beneficiary elected not to use these days or was properly deemed to have made such an election, these days would count as Medicare covered days under pre-catastrophic coverage rules. If the file documents that the beneficiary elected not to use available lifetime reserve days (or was properly deemed to make such an election), these days would count as additional days of care available under catastrophic coverage.

Comment: Commenters noted that the rules providing for implementation of the revised target amount under Public Law 100-360 did not include application of the transition provisions of section 101(c)(2)(B) of Public Law 101-234. They asked that the final rule be revised to

provide for consideration of this provision.

Response: We concur with the comments on the transition provisions of Public Law 101-234. In accordance with section 101(c)(2)(B) of Public Law 101-234, we are revising the regulations to require that the Public Law 100-360 target rate revision will be applied to Medicare discharges occurring on or after January 1, 1990, if those cases were admitted as inpatient Medicare beneficiaries before that date. We note that the full adjusted target rate (based on unlimited hospital days) will apply to these discharges even though the benefit period limitation will apply to the portion of the stay occurring in 1990.

Comment: Several commenters recommended that the days, costs, and discharges for Medicare patients be included in the target rate adjustment even when those individuals had exhausted their eligibility to Medicare Part A benefits prior to admission. The commenters cited the legislative history of Public Law 101-234 as support for their position that we should include the cost of these patients in the catastrophic adjustment. Several commenters presented data from selected hospitals indicating that individuals who had exhausted Medicare inpatient hospital benefits prior to admission may have longer length of stays than eligible Medicare beneficiaries who exhausted their inpatient hospital benefits after admission.

Response: Section 101(c)(2)(A)(ii) of Public Law 101-234 clarified that the adjustment to the target amount should be made without regard to whether a beneficiary had exhausted benefits prior to January 1, 1989. Our policies do provide for including the days and cost for Medicare beneficiaries who exhausted inpatient hospital benefits after admission, but prior to January 1, 1989. We are presuming that since at least a portion of the stay was covered by Medicare, the stay would have been covered in its entirety in the absence of the precatastrophic limitation on inpatient hospital days. If an individual was admitted after inpatient hospital benefits had been exhausted, however, that patient is not a Medicare beneficiary at admission. In such cases, there is no way for us to determine whether the patient received a hospital level care throughout the stay. Thus, although some evidence was submitted to indicate these patients may have a longer length of stay, no evidence was submitted that indicate that the longer stays would have been covered by Medicare and that the cost per discharge for the portions of stays that would have been covered was higher than for beneficiaries who exhausted benefits after admission.

Although such individuals' costs may not be included in the target rate adjustment under § 413.40(i), their costs would be paid for under the catastrophic provisions once Medicare coverage was reestablished after January 1, 1989 if they remained an inpatient and required hospital-level care. Thus, hospitals would receive payments for the costs of such inpatients once Medicare beneficiary status was reestablished under Public Law 100-360. This policy is consistent with the amendment made by section 104(c)(2)(A)(ii) of Public Law 101-234, which amended section 104(c)(2) of Public Law 100-360 to require that the adjustment to the target rate for discharges occurring in portions of cost reporting periods beginning on or after January 1, 1989 and before January 1, 1990 be made without regard to whether such beneficiaries exhausted their benefits before January 1, 1989. The adjusted target rate is also to apply to any discharge occurring on or after January 1, 1990 if the admission occurred before January 1, 1990. The adjusted target rate is applicable to all Medicare discharges occurring within the specified timeframes, regardless of whether benefits were exhausted before January 1, 1989 or before admission to the hospital. As a result of these factors, we do not find it appropriate to revise our rules regarding exclusion of costs for patients who had exhausted Medicare benefits prior to admission in revising the target rate for catastrophic purposes.

III. Changes to DRG Classifications and Weighting Factors

A. Background

Under the prospective payment system, we pay for inpatient hospital services on the basis of a rate per discharge that varies by the DRG to which a beneficiary's stay is assigned. The formula used to calculate payment for a specific case takes an individual hospital's payment rate per case and multiplies it by the weight of the DRG to which the case is assigned. Each DRG weight represents the average resources required to care for cases in that particular DRG relative to the average resources used to treat cases in other DRGs.

Congress recognized that it would be necessary to recalculate the DRG relative weights periodically to account for changes in resource consumption. Accordingly, section 1886(d)(4)(C) of the Act requires that the Secretary adjust the DRG classifications and weighting factors annually beginning with discharges occurring in FY 1988. These adjustments are made to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources. The changes to the DRG classification system and the recalibration of the DRG weights for discharges occurring on or after October 1, 1990 are discussed below.

B. DRG Reclassification

1. General

Cases are classified into DRGs for payment under the prospective payment system based on the principal diagnosis, up to four additional diagnoses, and up to three procedures performed during the stay, as well as age, sex, and discharge status of the patient. The diagnostic and procedure information is reported by the hospital using codes from the International Classification of Diseases, Ninth Edition, Clinical Modification (ICD-9-CM). The intermediary enters the information into its claims system and subjects it to a series of automated screens called the Medicare Code Editor (MCE). These screens are designed to identify cases that require further review before classification into a DRG can be accomplished.

After screening through the MCE and any further development of the claims, cases are classified by the GROUPER software program into the appropriate DRG. The GROUPER program was developed as a means of classifying each case into a DRG on the basis of the diagnosis and procedure codes and demographic information (that is, sex, age, and discharge status). It is used both to classify past cases in order to measure relative hospital resource consumption to establish the DRG weights and to classify current cases for purposes of determining payment.

Currently, there are 477 DRGs in 23 major diagnostic categories (MDCs). Most MDCs are based on a particular organ system of the body (for example, MDC 6, Diseases and Disorders of the Digestive System); however, some MDCs are not constructed on this basis since they involve multiple organ systems (for example, MDC 22, Burns).

In general, principal diagnosis determines MDC assignment. Within most MDCs, cases are then divided into surgical DRGs (based on a surgical hierarchy that orders individual procedures or groups of procedures by resource intensity) and medical DRGs. Medical DRGs generally are differentiated on the basis of diagnosis and age. Some surgical and medical

DRGs are further differentiated based on the presence or absence of complications or comorbidities (hereafter CC) only. Generally, GROUPER does not consider other procedures; that is, nonsurgical procedures or minor surgical procedures generally not done in an operating room are not listed as operating room (OR) procedures in the GROUPER decision tables. However, there are a few non-OR procedures that do affect DRG assignment for certain principal diagnoses, such as extracorporeal shock wave lithotripsy for patients with a principal diagnosis of urinary stones.

We proposed to make several changes to the DRG classification system. These proposed changes and the comments we received concerning them as well as our responses are set forth below. In addition to comments related to each of the specific proposed DRG classification changes, we received three general comments, as follows:

Comment: One commenter objected to the 2-month comment period as being unreasonable to assess the impact of proposed changes in DRGs. Because the GROUPER software will not be updated until the implementation of the final rule, this commenter had insufficient time to analyze the exact impact of the proposed DRG changes.

Response: Section 1886(e)(5) of the Act requires the Secretary to publish, by the May 1 before each fiscal year, the Secretary's proposed recommendation on an update factor for that fiscal year, and a final recommendation by September 1 of that year. Section 1886(d)(4)(C) of the Act also requires the Secretary to adjust the DRG classification and weighting factors annually. It has been our practice to combine these requirements and to publish a proposed rule by May 1 and a final rule by September 1 of each year that set forth our recommendations on the update factor, our changes to the DRGs, and any other changes to the prospective payment system we believe are necessary.

Publication of a proposed rule approximately May 1 does not allow for a comment period of more than 60 days, since we must have time to analyze and respond to public comment before publication of the final rule. In addition, we do not believe publication of a proposed rule before May 1, which would allow a longer comment period, is practical because it would not allow us time to accumulate sufficient data for statistical analysis, and, thus, our proposals could not be based on the most current data possible.

Comment: We received one letter commenting that the proposed changes in the length of stay for the orthopedic procedures, as set forth in the proposed rule, were not in the best interest of patient care and, in the long term, may add to the cost of caring for these patients by encouraging premature discharge. The commenter requested that we reconsider these lengths of stay.

Response: Length of stay figures are derived from the Medicare inpatient discharge claims data; the figures in Tables 5 and 7 (which report length of stay) were based on FY 1989 data. Table 5 presents the geometric mean length of stay, which is used only to establish the outlier threshold and determine payment for day outlier cases. Table 7 presents the arithmetic mean length of stay, which is used solely for illustrative purposes. These length of stay figures are informational only and are not a requirements of the prospective payment system. Under the prospective payment system, payment is made on an established amount per discharge by DRG and is not based on the length of time patients remain in the hospital. The prospective payment system does not place a limit on a patient's length of stay in a hospital. Further, the length of stay is not a factor in calculating the payment rate (other than in outlier cases) or in establishing the DRG weight.

Comment: One commenter offered suggestions for improving the integration of new technology into the prospective payment system. The commenter believes that when HCFA revises DRG classifications and weights, it relies on resource consumption and overlooks other significant changes, such as new technology and changes in treatment patterns. The commenter believes that it is inappropriate to assign new technology-specific procedures to existing DRGs merely because costs are similar. The commenter suggests that HCFA use "clinical coherence" as an indicator of appropriate procedure grouping within a DRG. The commenter also suggests that new DRGs be considered if a new technology or treatment pattern offers significant benefits not otherwise available.

The commenter also believes that the MEDPAR may be an inaccurate reflection of costs associated with new technology and treatment patterns. The commenter suggests that HCFA use a broader data base including non-Medicare cases and encourage the submission of data on treatment patterns and new medical products by hospitals, researchers, technology manufacturers, and medical practitioners.

Response: HCFA considers the effects of new technology and changes in practice patterns on resource use when revising the DRG classification system and recalibrating the DRG relative weights. New technologies are incorporated into the prospective payment system based on the types of cases and procedures they are used in, using the procedure and diagnosis codes on the Medicare bill. Cases are assigned to a DRG that contains cases that are similarly clinically and in terms of resource use. One example of DRG classification changes made based on new technology and changes in treatment patterns is MDC 5, Diseases and Disorders of the Circulatory System. (See section II.B.3 of this preamble.)

The annual prospective payment system update factor is meant to recognize, among other factors, the impact of new technologies. In determining our recommended update factor, as required by section 1886(e)(4) of the Act, we include factors for changes in productivity and science and technology advancement as well as changes in practice patterns. (See appendix C of this final rule for our FY 1991 recommended update factor.) Also, the DRG weighting factors are recalibrated each year based on the latest available charge data in order to ensure the distribution of Medicare payments across DRGs based on average resource costs. As charges for new technologies are incorporated into our data base, the DRG weight reflects the changes in the relative resource intensity of specific DRGs. We note that Medicare payment for capital-related technology costs are made as a pass-through on a reasonable cost basis and, therefore, are not included in the DRG payment.

The MEDPAR file consists of Medicare bill information that is reported on the uniform bill form (UB-82) using a standard set of instructions. The diagnosis and procedure codes included on the bill are subject to a review for accuracy by the PROs. We do receive information on new technologies from hospitals, medical administrators and staff, researchers, and manufacturers and consider these data in our ongoing analysis of DRG classification. While this information is useful in our consideration of DRG classification, it is not uniform in several respects such as the time period and patient population covered or the factors included in the figures reported and, therefore, would not be useful in recalibrating the DRG relative weights. Although there is a 2-year time lag in the MEDPAR data used to analyze and recalibrate the DRG weights, we believe there would be a time lag involved in

collecting any set of comprehensive and accurate data. We believe that the MEDPAR is the best source available because it consists of data that are uniform across all cases and are specific to the Medicare population.

2. Creation of New DRGs

In order to improve payment equity, we proposed to revise the DRG classification system by adding 13 new DRGs. Two of these DRGs are associated with the restructuring of MDC 5 (Diseases and Disorders of the Circulatory System) and are discussed below in section III.B.3 of this preamble. The other 11 DRGs affect the assignment of the following types of cases: bone marrow transplants, liver transplants, tracheostomies, multiple significant trauma, and human immunodeficiency virus (HIV) infections. These are significant changes that we believe will increase the amount of variation in resource costs explained by DRGs by approximately 13 percent.

Many of the changes we proposed build on the method of case classification used in New York State, which established a prospective payment system for all payers (except Medicare and CHAMPUS) effective January 1, 1988. The New York system is based on the Medicare prospective payment system; however, New York State, in conjunction with 3M/Health Information Systems (HIS) (formerly, Health Systems International (HSI)), modified the Medicare DRGs to address the needs of the New York non-Medicare population. We modeled our proposed DRG changes for tracheostomy, multiple significant trauma, and HIV cases on the New York system with modifications for the Medicare population. These DRG additions and the other DRGs we proposed to add (other than the MDC 5 changes) are set forth below in this section.

Previously, Medicare discharges were generally assigned to MDCs based on principal diagnosis and then further assigned to the surgical or medical DRGs included in those MDCs. However, we proposed to assign discharges to the proposed DRGs for liver transplants, bone marrow transplants, and tracheostomies based on the procedure codes rather than first assigning the discharges into one of the current MDCs based on principal diagnosis.

The detailed description of the new DRGs are set forth below.

a. *Liver Transplants.* Medicare coverage of liver transplants for children under the age of 18 for certain specified conditions has been in effect since February 9, 1984. In a notice published in the **Federal Register** on March 8, 1990 (55 FR 8545), we proposed to expand coverage of liver transplants to adults with certain specified conditions. In that proposed notice, we stated that the effective date of coverage for these liver transplants would be March 8, 1990 under certain circumstances. Medicare payment will continue to be made for children's liver transplants for biliary atresia (diagnosis code 751.61) and would be expanded to adult liver transplants performed in approved facilities for the following covered conditions. (The diagnosis code to which the condition is assigned is also noted.)

- Primary hemochromatosis (275.0)
- Wilson's disease (275.1)
- Alpha-1 antityrypsin deficiency disease (277.6)
- Alcoholic cirrhosis (571.2)
- Postnecrotic cirrhosis (Hepatitis B, antigen negative) (571.5)
- Primary biliary cirrhosis (571.6)
- Primary sclerosing cholangitis (576.1)

These cases currently group to MDC 7 and MDC 10. Within MDC 7, liver transplants are assigned to DRGs 191 and 192) Pancreas, Liver and Shunt Procedures) [1]. Liver transplant cases in MDC 10 group to DRG 468 if no surgical procedure related to the patient's principal diagnosis is performed.

Since Medicare coverage of liver transplants has now been proposed for adults, we proposed to add a new DRG 480 (Liver Transplant) exclusively for all liver transplants (whether adult or juvenile). We proposed to assign Medicare discharges to DRG 480 only if either procedure code 50.51 (Auxiliary liver transplant) or 50.59 (Other transplant of liver) is performed at an approved liver transplant center and any one of the covered conditions (listed above) is either a principal or secondary diagnosis. These conditions are reported under the following diagnosis codes: 275.0, 275.1, 277.6, 571.2, 571.5, 571.6, 576.1, or 751.61.

As is currently our policy for organ acquisition costs in kidney and heart transplant cases paid under Medicare, we proposed to pay for liver acquisition costs separately on a reasonable cost basis. We proposed to revise §§ 412.2(d)(4) and 412.113(d), which describe payment for kidney acquisition costs as a pass-through, to include heart and liver acquisition costs, also. We received no comment on the proposed changes in the regulations and have included them as final in this document. However, we did receive comments concerning the treatment of bone marrow acquisition charges, which are discussed in section III.B.2.b of this preamble. In addition, we received several comments on our proposed liver transplant DRG as follows:

Comment: One commenter was concerned with the treatment of liver transplant cases in non-Medicare-approved liver transplant centers. Specifically, the commenter is interested in how the GROUPER identifies whether a hospital is a Medicare-approved liver transplant center. If the hospital is not an approved center, the commenter wants to know if the patient would be assigned to DRG 480 (Liver Transplant) but not allowed payment, or if a portion of the hospital stay would be covered by Medicare.

Response: Once the expanded coverage for liver transplants is final, Medicare payment will be made to approved transplant centers for covered liver transplants assigned to DRG 480. The Medicare Code Editor (MCE), not the GROUPER, will first identify the liver transplant cases by the procedure code (50.51 or 50.59); then, the intermediary will check the provider number to determine if the hospital is a Medicare-approved liver transplant center and the effective date for approval. If the other Medicare criteria for coverage are met, payment will be made for those cases in which the hospital is an approved transplant center and the transplant is performed on or after the approval date. If the hospital is not approved, and the liver transplant is the sole purpose of the admission, the bill is returned to the provider, and a "no pay bill" is requested. Neither physician services nor inpatient services associated with the transplantation procedure would be covered in this case. A case such as this would be assigned to DRG 480, but no Medicare payment would be made. Where a patient is admitted to a nonapproved transplant center for treatment of a liver or other condition and a decision to perform a liver transplant is made at a date subsequent to the admission, the bill will be processed through the GROUPER and assigned to the appropriate DRG for the covered part of the hospital stay. Therefore, a portion of the hospital stay not related to the transplant could be covered by Medicare as long as the reason for admission was not to receive a liver transplant.

Comment: A commenter believes that the linkage between Medicare coverage

[1] A single title combined with two DRG numbers is used to signify pairs, the first DRG of which is cases with CC and the second of which is cases without CC. If a third number is included, it represents cases of patients who are age 0–17.

policy and the DRG classification system is inappropriate and will cause a great deal of confusion among other users of the DRG classification system. The purpose of the DRG classification system is to classify patients, not to implement coverage policy. If a patient receives a liver transplant, the patient should be classified into the liver transplant category. If Medicare chooses not to cover the liver transplant or to cover the liver transplant for patients only with certain diagnoses, this should be a separate coverage decision.

Response: The GROUPER software program classifies all cases and is not limited by Medicare coverage policy. The prospective payment system is based on reported diagnosis and procedure codes and is linked to Medicare coverage policy through the MCE for Medicare payment purposes. The MCE will be used to screen liver transplant cases for Medicare coverage. In the absence of the MCE edit, the GROUPER would assign all liver transplant cases to the liver transplant DRG regardless of the diagnosis. Thus, the coverage decision and the classification issue are handled separately.

Comment: One commenter was concerned that 18 of the 24 cases used in determining the proposed weight did not have an acquisition charge listed and that this might indicate that these may not be liver transplant cases, but miscoded resections or shunt procedures. In the commenter's experience, it is accepted practice to maintain organ acquisition charges as a separate line item when submitting bills for payment.

Response: Organ acquisition costs, except for bone marrow acquisition costs, are paid as a pass-through on a reasonable cost basis under Medicare; thus, the DRG payment is not designed to cover the acquisition cost. Our policy has always been to assume that every bill for a transplant procedure also has included charges for organ acquisition. If no acquisition charge is separately identified on the bill, we have assumed that it was included in total charges. Thus, if a bill clearly shows an acquisition charge for an organ, we have deducted that charge prior to setting the DRG weights. If a bill does not separately identify an acquisition charge, we have deducted an estimate of those charges from the bill.

Upon further investigation, we have concluded that some transplant bills may not include acquisition charges. Hospitals that procure the organ for transplantation in their own facility should show the organ acquisition charge on the transplant patient's Medicare bill. However, in cases where the organ is acquired from another facility through an organ procurement agency, the transplanting hospital may not include the organ acquisition charge as a line item or in its total charges on the patient's bill. Therefore, we are revising our methodology for adjusting the total charges for acquisition charges. We will no longer impute an organ acquisition charge for a bill that does not include a specific separate charge for organ acquisition. Only those cases showing an organ acquisition charge will have that charge subtracted from the total charges prior to using the charges in recalibrating the DRG weight.

As for the possibility that these cases are miscoded, we reviewed our data to determine if the beneficiaries were inpatients of transplant centers. We identified three cases involving hospitals that are not transplant centers whose bills included a liver transplant procedure code. We removed these cases from the data base since, once the expanded coverage for liver transplants is final, payment will be made only to approved transplant centers.

Comment: One commenter, while agreeing that a separate DRG for liver transplants is appropriate, was not convinced that the category is sufficiently well-defined for case-level prospective payment. The commenter also questioned if HCFA had evaluated whether separate DRG categories are indicated for different age patients or for multiple transplant patients.

Response: We are required by provisions in section 1886(d) of the Act to pay for covered inpatient services furnished by an acute care hospital on a prospectively-determined amount per discharge that varies by the DRG to which the beneficiary's case is assigned. As with DRG 302 (Kidney Transplant) and DRG 103 (Heart Transplant), the proposed DRG 480 (Liver Transplant) is well-defined clinically by the transplant procedure, which is unique from other surgical procedures. Also, the amount of resources used for liver transplants differentiates them from other types of cases in other DRGs. The alternative to a separate DRG for liver transplants would be to continue to classify them with less resource-intensive cases. Payment on a reasonable cost basis is not an option under the law.

We do not believe that it is appropriate at this time to propose a DRG for multiple transplant patients or for different age groups given our limited experience with Medicare liver transplant cases. The cases used to calculate the proposed DRG weight, as well as the final weight, included a multiple transplant case and patients ranging from 23 to 69 years of age.

Comments: Several commenters expressed concern about the 34 percent reduction in the DRG weight of 21.0000 for liver transplants announced in the Medicare proposal to cover adult liver transplants on March 8, 1990 (55 FR 8546) to the weight of 13.8965 as set forth in the May 9, 1990 prospective payment system proposed rule (55 FR 19429). These commenters questioned the data used to determine these weights. Some commenters stated that their hospitals' average cost per case is significantly higher than the payment that would be provided by the proposed DRG weight of 13.8965.

The commenters believe that the data, 24 cases from 10 hospitals, used to determine the proposed DRG weight are too limited. They also questioned the availability of MEDPAR data on liver transplants, since liver transplants were not covered in FY 1989. One commenter suggested that we collect data from transplant centers, as we did to determine the heart transplant DRG weight when that procedure was first covered.

One commenter stated that 4 percent of the liver transplant patients in his hospital are over the age of 65, and that the hospital's data indicate that this population is more severely ill and develops more postsurgical complications.

Another commenter believes that a minimum volume of 20 to 25 liver transplants per year is necessary in order to maintain the high surgical and nursing levels required to successfully treat these critically ill patients and, that if hospitals in our data base do not meet this minimum level, he questions whether their costs may be accurately representative of the cost incurred in liver transplants.

One commenter recommended that the implementation of the proposed DRG weight of 13.8965 be delayed and the DRG weight of 21.0000 be retained pending further reconsideration of the data by HCFA. Another commenter recommended phasing-in the reduction with revisions based on more current data as Medicare claims are processed.

It was pointed out that it would be useful to centers applying for Medicare-approved liver transplant center status to have the data used for the proposed DRG weight in order to determine if their costs are similar and to provide a clearer understanding as to why Medicare is proposing such a sharp decrease in the DRG weight. One commenter stated that the proposed rule did not include details of the data (that

is, range of charges, length of stay, and diagnosis codes). Another commenter suggested that we release the MEDPAR data for centers to review and comment on before finalizing the DRG weight.

Response: The proposed liver transplant DRG weight of 13.8965 was based on more current data than the DRG weight of 21.0000 and is weighted relative to the other DRGs that currently exist. The DRG weight of 21.0000 published in the March 8, 1990 proposal for Medicare coverage of adult liver transplants was based on FY 1984 Medicare bill data and 1983 and 1984 sample claims data. The proposed DRG weight of 13.8965 was based on FY 1989 MEDPAR data for 24 liver transplant cases that meet the proposed Medicare criteria for coverage. We note that the Medicare DRG payment does not include payment for organ acquisition costs, payment for physicians, or payment for capital or other pass-through costs. Therefore, an accurate comparison cannot be made between a hospital's cost per liver transplant case and the DRG payment in order to determine the amount that the payment exceeded or fell short of the cost of treating that case.

We carefully reviewed the final FY 1989 MEDPAR data for liver transplant cases to ensure that they met the proposed coverage criteria and were performed by hospitals that have the potential for becoming Medicare-approved transplant centers. This review resulted in the loss of three cases from three hospitals that are not liver transplant centers. In addition, in calculating the proposed DRG weight for DRG liver transplants, we subtracted an estimate of liver acquisition charges from the total charges of liver transplant cases if no acquisition charge was shown on the bill. As explained above in response to another comment, we have not done this on the final recalibration. We subtracted only acquisition charges from those bills that actually showed such charges. All these steps have resulted in an increase in the weight for DRG 480. The final DRG 480 weight is 15.2645. This weight is based on 29 liver transplant cases in the FY 1989 MEDPAR data.

We believe that 29 cases are adequate to establish a weight for liver transplants. The methodology to recalibrate the DRG weights (see section III.C of this preamble) requires a minimum of 10 cases to compute a reasonable DRG weight. Since the FY 1989 MEDPAR data included more than 10 (that is, 29) liver transplant cases that meet the proposed Medicare criteria for coverage, these cases were used to determine the liver transplant DRG weight in a manner consistent with the other DRG weights. When Medicare proposed to cover heart transplants on October 17, 1986 (51 FR 37164), there were fewer than 10 heart transplant cases in the FY 1984 Medicare bill data. Therefore, we established the initial heart transplant DRG weight based on the most recent Medicare and non-Medicare charge data accumulated under the National Heart Transplant Study for procedures performed in 1983. The 29 liver transplant cases used to determine the DRG weight of 15.2645 include patients ranging in age from 23 to 69 years of age with only 4 patients over the age of 65.

We have not accepted the suggestion to limit the data for the DRG weight determination to bills from hospitals with a minimum volume of 20 liver transplant bills per year, in part because we currently do not have available to us information on the number of liver transplants (Medicare and non-Medicare) performed per year by a given hospital. It is possible that the 29 cases included in our analysis were, in fact, performed at transplant centers that would meet the suggested minimum volume of 20 transplants per year. We note that the actual requirements for approval as a Medicare-approved liver transplantation center are still under consideration and have not yet been published as final. However, in keeping with the spirit of the suggestion, we have excluded bills from three hospitals that we determined are not liver transplant centers.

We disagree with the suggestion to delay or phase-in the reduction of the DRG weight as this weight is based on current data and is relative to the weights of the other DRGs.

The MEDPAR data include detailed information on approximately 10 million Medicare discharges that were used to calculate the liver transplant DRG weight and all other DRG weights. These data are available to requestors at a cost of $2,870 for each fiscal year by submitting a written request to the following address: HCFA Office of Statistics and Data, Management, Bureau of Data Management and Strategy, Room 3-A-12 Security Office Park Building, 6325 Security Boulevard, Baltimore, MD 21207.

(See the May 9, 1990 proposed rule at 55 FR 19461 for additional information concerning the MEDPAR data.) The conditions that will be covered and their corresponding diagnosis codes are included in the text of this section, and the length of stay information is included in Table 7B.

Comment: Two commenters objected to the statement that teaching hospitals performing liver transplants would receive additional Medicare payment for the indirect medical education (IME) costs. One commenter stated that the IME adjustment has never been used before as rationale for decreasing the relative weight of DRGs. The commenter also stated that the IME adjustment should be established to cover those particular costs and questioned how much of this payment should be considered as added payment for providing liver transplants to Medicare patients. The commenter does not believe that this policy is consistent with the establishment of other transplant procedures that have been approved by Medicare. The other commenter believes that the assertion that transplant facilities will probably receive IME and disproportionate share payments that will significantly increase the actual payments for covered liver transplants is inappropriate and too highly individualized for each hospital. This commenter stated that the relative weights of DRGs should be calculated based on the average resources required to treat the patient and that additional payments received by the hospital are irrelevant in determining the appropriate DRG weight.

Response: It appears that our discussion of the proposed weight of 13.8965 for DRG 480 has caused some confusion. It was never our intention to reduce the weight of this DRG. The proposed weight was based on more current data than the data that were used to estimate the weight in the earlier notice. Recognizing that this discrepancy in the weights would cause concern, we pointed out that the final payment to a hospital for a given case is not based solely on the DRG weight.

The statement that facilities performing liver transplants tend to be larger teaching hospitals that receive IME and, in most cases, disproportionate share payment adjustments that will significantly increase the actual payments for covered liver transplants, was not intended to serve as rationale for a lower DRG weight, but to point out that in most cases the Medicare payment for liver transplant cases will be greater than that indicated by the DRG weight. The additional Medicare payments for IME and disproportionate share do not affect the DRG weights but are removed when the charges are standardized before the DRG weights are recalibrated. The weight for the liver transplant DRG is calculated using the same methodology as the other DRGs.

Comment: One commenter pointed out that liver transplants are much more complex and resource intensive than other organ transplants such as the heart transplant. According to this commenter, the liver transplant requires 12 hours of surgery, 5 surgeons, 6 nurses, 2 anesthetists, and 2 certified registered nurse anesthetists. The heart transplant requires 4 to 5 hours of surgery, 3 surgeons, 3 nurses, 2 anesthetists, and 1 certified registered nurse anesthetist. The commenter is concerned that the proposed DRG weight of 13.8965 does not take into account the additional staff requirements and technical expertise.

Response: Medicare payment for the surgeons, anesthetists, and certified registered nurse anesthetists is not included in the DRG payment; thus, these charges are not included in the DRG weight determination. These services are paid separately under Medicare Part B. The DRG weight is calculated using the total charges on the bill for the hospital services payable under Part A. To the extent inpatient stays involving a liver transplant require more intensive hospital resources (and result in higher charges), this will be reflected in the DRG weight. In this regard, we note that the final weight for DRG 480 is 15.2645 compared to the weight of 12.9086 for DRG 103, Heart Transplant.

b. *Bone marrow transplants.* In the September 1, 1989 final rule, we responded to a comment that requested that we establish a unique DRG for autologous bone marrow transplants. We stated that since we had not included such a proposal in the May 8, 1989 proposed rule, and coverage for autologous bone marrow transplants had begun only on April 28, 1989, we would defer making such a change but that we would analyze the data that became available in the following year. We analyzed the data available in the FY 1989 MEDPAR file on bone marrow transplants. The data show that these cases are much more resource intensive than the other cases in the DRGs to which they are currently being assigned and that our data base now includes a sufficient number of these cases to support the addition of a DRG.

Therefore, we proposed to add DRG 481 (Bone Marrow Transplant). We proposed to assign both allogeneic and autologous bone marrow transplants to this DRG. Bone marrow transplants had been assigned to four DRGs depending on the patient's principal diagnosis: DRG 394 (Other OR Procedures of the Blood and Blood Forming Organs), DRG 400 (Lymphoma and Leukemia with Major OR Procedure), and DRGs 406 and 407 (Myeloproliferative Disorder or Poorly Differentiated Neoplasms with Major OR Procedure).

We proposed that only those cases with a condition covered by Medicare for bone marrow transplantation would be paid under DRG 481. We stated that we would add a screen for these cases to the MCE. Each bone marrow transplant discharge would be identified by the screen and further reviewed by the intermediary before payment is made to ensure that all the coverage conditions are met.

Allogeneic bone marrow transplantation is a procedure in which a portion of a healthy donor's bone marrow is obtained and prepared for intravenous infusion to restore normal marrow function in recipients having an inherited or acquired marrow deficiency or defect. The use of allogeneic bone marrow transplantation can be covered under Medicare for the following conditions:

- Leukemia.
- Aplastic anemia.
- Severe combined immunodeficiency disease (SCID).
- Wiskott-Aldrich syndrome.

Autologous bone marrow transplantation is a technique for restoring bone marrow stem cells using the patient's own previously stored marrow. Autologous bone marrow transplantation can be covered under Medicare for patients with the following conditions:

- Acute leukemia in remission for patients who have a high probability of relapse and who have no HLA-matched donor.
- Resistant non-Hodgkin's lymphomas or those presenting with poor prognostic features following an initial response.
- Recurrent or refractory neuroblastoma.
- Advanced Hodgkin's disease for patient's who have failed to respond to conventional therapy and have no HLA-matched donor.

We proposed to assign discharges to DRG 481 as follows:

- Procedure code 41.01 (Autologous bone marrow transplant) is performed and any one of the following is either a principal or secondary diagnosis:

—Acute leukemia, in remission (V10.60, V10.61, V10.62, V10.63, and V10.69).
—Advanced Hodgkin's disease (201.00–201.08, 201.10–201.18, 201.20–201.28, 201.40–201.48, 201.50–201.58, 201.60–201.68, 201.70–201.78, 201.90–201.98).
—Resistant non-Hodgkin's lymphomas (202.80–202.88).
—Recurrent or refractory neuroblastoma (140.0–199.1).

- Either procedure code 41.02 (Allogeneic bone marrow transplant with purging) or 41.03 (Allogeneic bone marrow transplant without purging) is performed and any one of the following is either a principal or secondary diagnosis:

—Lymphoid leukemia (204.0–204.9).
—Myeloid leukemia (205.0–205.9).
—Monocytic leukemia (206.0–206.9)
—Other specified leukemia (207.0–207.8).
—Leukemia of unspecified cell type (208.0–208.9).
—Wiskott-Aldrich syndrome (279.12).
—Severe combined immunodeficiency disease (279.2).
—Aplastic anemia (284.0–284.9).
—Leukemia, in remission (V10.60–V10.69).

- In the proposed rule we stated that if procedure code 41.00 (Bone marrow transplant, not otherwise specified) is reported with one of any of the diagnoses set forth in the two preceding paragraphs, the case would be developed further and would be assigned to DRG 481 only after verification that a covered transplant was performed.

Unlike the other transplant DRGs (that is, kidney, heart, and liver), for which the cost of the organ acquisition is paid on a reasonable cost basis, the payment for the acquisition costs for bone marrow transplants is included in the DRG payment. Therefore, in calculating the DRG weight for bone marrow transplants under the methodology set forth below in section III.C of this preamble, bone marrow acquisition charges were not subtracted from the total charges prior to computing the average charge for the DRG and, subsequently, its relative weight.

Comment: One commenter asked for clarification of the statement in the proposed rule that, prior to the payment of a claim containing a bone marrow transplant code, a case will be "further reviewed by the intermediary." The commenter was interested in the criteria that will be used by the fiscal intermediary to allow or disallow payment and whether or not the intermediary will need the medical record to conduct its review. The commenter also requested information on the time lag hospitals can expect between billing, FI review, and payment.

Response: The "further review by the intermediary" refers to the verification process by which the intermediary will check the diagnosis codes on the bill of each bone marrow transplant case against the Medicare coverage criteria listed in the Medicare Coverage Issues Manual and described above in this section of the preamble. Those cases

with at least one of the diagnosis codes of a condition that Medicare will cover coupled with the correct bone marrow transplant procedure code will be processed through the GROUPER assigned to the bone marrow transplant DRG, and paid as such. This review will be done through an automated interface on the MCE and will not increase the time required to process these bone marrow transplant bills. However, if procedure code 41.00 (Bone marrow transplant, NOS) is coded with one of the covered diagnoses, the bill will be returned to the hospital for a more specific procedure code. Since different conditions are covered for autologous and allogeneic bone marrow transplants, the bill must be coded specifically as either allogeneic or autologous to be paid as DRG 481. The FI will not review the medical records of the bone marrow transplant cases prior to payment. However, the PRO may review cases assigned to and paid under DRG 481, Bone Marrow Transplant, on a postpayment review basis. In this case, the medical records for the bone marrow transplant will be reviewed.

Comment: One commenter pointed out that the proposed rule stated that Medicare will pay for bone marrow transplants done to treat aplastic anemia; however, the codes that include this diagnosis were not listed (55 FR 19430).

Response: Although aplastic anemia was mentioned in the proposed rule as a covered condition (55 FR 19430), the ICD-9-CM codes for aplastic anemia (284.0-284.9) were inadvertently left off the list of covered codes printed in the proposed rule. These codes will be included as covered diagnoses.

Comment: Two commenters objected to the Medicare coverage guidelines for autologous bone marrow transplants that lists codes V10.60 through V10.69 as the ICD-9-CM diagnosis codes for acute leukemia in remission. They stated that these codes do not indicate leukemia in remission. They pointed out that, according to current coding guidelines, the V10 series of codes are used to indicate the site of a previous cancer that has been excised or eradicated and no longer exists. They also pointed out that leukemia in remission is still an existing cancer and that there are no ICD-9-CM codes that specifically indicate leukemia in remission. They recommended that HCFA ask the ICD-9-CM Coordination and Maintenance Committee to revise the leukemia codes to designate specific codes for leukemia in remission. They also suggested that, in the meantime, the leukemia code series (diagnoses 204 through 208) be used instead of the V10 codes to identify acute leukemia and that the leukemia in remission be identified by a chart review, since HCFA already plans to screen each bone marrow transplant case to ensure that all coverage conditions are met.

Response: The ICD-9-CM alphabetic index instructs coders to use the V10.6 series for leukemia in remission. The ICD-9-CM Coordination and Maintenance Committee is currently proposed to create diagnosis codes for leukemia in remission. The earliest date that approved changes would become effective is October 1, 1991. In the interim, the Medicare coverage requirements will remain the same, and coding guidelines will be published in the Coding Clinic for ICD-9-CM (Fourth quarter, 1990) to instruct hospitals to make an exception to coding advice published previously in the Coding Clinic for ICD-9-CM (May-June, 1985), which indicated that the V10 series not be used to indicate a cancer remission. The revised guidelines will instruct that the V10.6X codes (Personal history of leukemia in remission) are to be used when a patient is admitted with leukemia in remission for an autologous bone marrow transplant. We note that the intermediaries will screen each bone marrow transplant case for a diagnosis code of a covered condition but that this screen will not include a review of the medical record.

Comment: Two commenters disagreed with the payment methodology for bone marrow acquisition charges. One disagreed with the proposal to include organ recovery costs in the bone marrow transplant DRG payment and recommended that they be treated in a manner consistent with other transplant procedures (that is, paid as a pass-through on a reasonable cost basis). The other commenter urged us to reconsider this policy and pay allogeneic bone marrow acquisition costs as a pass-through, on a reasonable cost basis, as is done with kidney, heart, and liver acquisition costs.

Response: Under the prospective payment system, payment for bone marrow acquisition costs are and have always been included in the DRG payment for the bone marrow transplant. There are differences in both the acquisition and payment of bone marrow and organs such as the kidney, heart, and liver. With kidney, heart, and liver transplants, the donor and recipient may often be in different hospitals, and the procuring, preservation, and transportation of donated organs is coordinated through an organ procurement agency. The Medicare payment for the acquisition of these organs is made on a pass-through basis, generally to the hospital that did the procuring. With an allogeneic bone marrow transplant, the donor and recipient are usually in the same hospital. In the case of an autologous bone marrow transplant, the patient is both the bone marrow donor and recipient. The charges for bone marrow acquisition in both allogeneic and autologous bone marrow transplant cases are included on the recipient's Medicare bill, and the payment is included in the DRG payment for the recipient's bone marrow transplant.

Comment: Two commenters, while supporting the creation of a separate DRG for bone marrow transplants, are concerned with the adequacy and appropriateness of the DRG weight. One commenter is especially concerned with the small case volume (45 cases in the proposed rule) used to set the proposed DRG weight and their high variability in resource use and length of stay. One commenter stated that a review of the cost data at the commenter's hospital shows the proposed DRG weight to be "underweighted" by at least 50 percent. One commenter was not convinced that the DRG is sufficiently well-defined for case level prospective payment and also inquired if HCFA had evaluated whether separate DRGs are indicated for patients of different ages, allogeneic versus autologous bone marrow transplant patients, or multiple transplant patients. This commenter also reported that for pediatric patients receiving bone marrow transplants, those with a principal diagnosis in MDCs 10 and 16 have higher and more variable resource use on average than those pediatric patients with a principal diagnosis in MDC 17. These commenters recommended that HCFA develop a broader analysis of costs and charges associated with bone marrow transplant procedures than suggested in the proposed rule and that the appropriateness of the DRG weight be monitored so that revisions be made upon review of more current "actual" data as Medicare claims are processed.

Response: The proposed bone marrow transplant DRG weight of 11.9901 was based on FY 1989 MEDPAR data for 45 bone marrow transplant cases that met Medicare's criteria for coverage. The proposed DRG weight was among the highest of the DRG weights. As noted above for liver transplants, the Medicare DRG payment does not include capital, organ acquisition, or other pass-through costs, or physician and other part B services. Therefore, an accurate comparison cannot be made between a

hospital's cost per bone marrow transplant case and the DRG payment in order to determine the amount that the payment exceeded or fell short of the cost of treating that case.

The methodology to recalibrate the DRG weights (see section III.C of this preamble) requires a minimum of 10 cases to compute a reasonable DRG weight. Since the FY 1989 MEDPAR data used to set the final weights include 51 bone marrow transplant cases that meet the Medicare criteria for coverage, these cases were used to determine the bone marrow transplant DRG weight in a manner consistent with the other DRG weights. The final weight for DRG 481 is 12.4485.

We believe that the bone marrow transplant DRG is both appropriate and well-defined for case level prospective payment. DRG 481 (Bone Marrow Transplant) is well-defined clinically by the transplant procedure which is unique from other surgical procedures. Also, the amount of resources used for bone marrow transplants differentiates them from other types of cases in other DRGs. We do not feel that is appropriate at this time to split the bone marrow transplant DRG by type of bone marrow transplant or by patient age, or to create a separate DRG for multiple transplant patients. The bone marrow transplant cases in the MEDPAR file are fairly homogeneous both clinically and based on resource use. We will continue to evaluate the bone marrow transplant cases as part of our ongoing refinement to enhance clinical coherency and reduce variation in charges within each DRG.

c. Tracheostomy

Beginning with discharges occurring on or after October 1, 1987, cases with a principal diagnosis in MDC 4 (Diseases and Disorders of the Respiratory System) and one of the tracheostomy procedure codes 31.1 (Temporary tracheostomy), 31.21 (Mediastinal tracheostomy), or 31.29 (Other permanent tracheostomy) were assigned to a new DRG 474 (Respiratory System Diagnosis with Tracheostomy). We also created a new DRG 475 (Respiratory System Diagnosis with Ventilator Support). Currently, cases group to DRG 475 when a patient with a principal diagnosis in MDC 4 receives mechanical ventilation (procedure code 93.92) and no operating room procedure or tracheostomy is performed during the hospital stay.

We received many requests that we expand DRGs 474 and 475 to include patients with other than respiratory diagnoses. Our analysis of the FY 1988 and F 1989 MEDPAR data demonstrated that tracheostomy cases in the other MDCs have significant differences in resource consumption, with consistently higher average charges than other cases in the same DRG. Additionally, the charges for these tracheostomy cases, with the exception of certain cases with a mouth, larynx, or pharynx disorder, were more similar to each other than to the other cases in the MDCs to which they are currently assigned. Tracheostomy patients with a mouth, larynx, or pharynx disorder incurred significantly lower charges than other tracheostomy patients; however, their charges were still higher than those of other cases in the same DRG. Cases with a principal diagnosis of a mouth, larynx, or pharynx disorder are more likely to require a tracheostomy as a therapeutic measure related to the principal diagnosis rather than in response to respiratory failure requiring long-term ventilation.

We proposed to create two tracheostomy DRGs: DRG 482 for patients with a disorder of the mouth, larynx, or pharynx who have one of the tracheostomy procedures performed (procedure codes 31.1, 31.21, or 31.29), and DRG 483 for all other patients with at least one of the tracheostomy procedure codes. We proposed to delete DRG 474 since all cases that currently group to DRG 474 would now be assigned to DRG 483.

We proposed to assign tracheostomy patients to DRG 482 or 483 prior to other DRG and MDC assignment but after patients have been classified to the Liver or Bone Marrow Transplant DRGs 480 or 481. We proposed to group cases to the tracheostomy DRGs before the new DRGs for HIV infection or multiple significant trauma because, for the Medicare population, tracheostomy patients tend to incur higher charges than either HIV or trauma patients.

The response to our proposed tracheostomy DRGs was overwhelmingly favorable. However, some commenters wrote to suggest various revisions to these DRGs.

Comment: ProPAC is concerned about the incentives to code tracheostomy procedures and whether these additional cases will be similar to the cases upon which we based the weights for DRGs 482 and 483. ProPAC further commented that the subset of tracheostomy cases classified in MDC 4 indicate wide variation in length of stay and charges among cases. Also, many of these patients die in the hospital. The Commission findings suggest that further analysis to identify subgroups of tracheostomy cases may be warranted. Another commenter suggested that we conduct more research toward introducing further subdivision of the tracheostomy cases, at least for certain MDCs (as in the Yale model) or for surgical versus medical cases.

Response: We share ProPAC's concern that the volume of cases with tracheostomy procedures reported on the bill may increase. Heretofore, since payment was unaffected, hospitals had no financial incentive to report tracheostomies that were performed appropriately on patients with other than respiratory conditions (that is, those patients outside NDC 4). With the establishment of the higher-weighted DRGs for tracheostomy cases, hospitals will now have an incentive to report tracheostomies outside MDC 4. As ProPAC pointed out, we experienced a 40 percent increase in the reporting of tracheostomy cases in MDC 4 when a separate DRG was created for tracheostomy cases in MDC 4 (DRG 474) in FY 1988. However, we have no basis for assuming that any increased volume of reported tracheostomies under the new DRGs would be for patients with different resource requirements than those in the data base used to establish the new DRGs.

We plan to evaluate the impact and performance of the tracheostomy DRGs when FY 1991 Medicare discharge data become available. If these DRGs show increases in heterogeneity, that is, dissimilar cases with high charge variance, consideration will be given to appropriate modification of the tracheostomy DRGs.

We evaluated creating separate tracheostomy DRGs for surgical and medical cases as one component of our analysis prior to proposing the mouth, larynx, or pharynx disorder with tracheostomy and all other conditions with tracheostomy groups. While in most MDCs, surgical cases with a tracheostomy showed higher charges than the medical cases with a tracheostomy, we concluded that this division would not significantly reduce the amount of variation in resource use within the tracheostomy DRGs. Therefore, the decision was made to propose DRGs based on all MDCs, with separate DRGs for mouth, larynx, or pharynx disorders and for all other patients. These two groups demonstrated the most substantial differences from each other.

Comment: One commenter brought to our attention two procedure codes that were not included in the list of tracheostomy procedure codes that would assign cases to DRG 482 or 483. These two codes are procedure codes 30.3 (Complete laryngectomy)—and 30.4 (Radical laryngectomy). A laryngectomy

is the removal of the voice box. Because a tracheostomy is virtually always performed as part of the procedure, coders are directed by the ICD-9-CM, volume 3, not to report the tracheostomy codes when codes 30.3 and 30.4 are reported. The commenter recommended that the procedure codes that group to the tracheostomy DRGs be expanded to include 30.3 and 30.4 so that discharges involving either of these procedures would also be assigned to DRG 482 (Tracheostomy with Mouth, Larynx, or Pharynx Disorder).

Response: Currently, discharges with procedure codes 30.3 and 30.4 are assigned to DRG 49 (Major Head and Neck Procedure) and DRGs 76 and 77 (Other Respiratory System Procedures). In the process of expanding the tracheostomy procedures from DRG 474, we overlooked the two laryngectomy (with tracheostomy) procedures. Our medical consultants verified that these two procedures do, in fact, include tracheostomy. Evaluation of MEDPAR data confirms that these cases have a distribution of charges similar to DRG 482. Based on this finding, as well as the current classification of cases with these procedures primarily to DRG 49, we are providing that procedure codes 30.3 and 30.4, when performed with any diagnosis, will group to DRG 482. Therefore, the GROUPER will assign all cases to DRG 482 with a principal diagnosis of mouth, larynx, or pharynx disorder and procedure codes 31.1, 31.21, or 31.29; or cases with any principal diagnosis and procedure codes 30.3 or 30.4. Cases with other principal diagnoses and procedure codes 31.1, 31.21, 31.29 will group to DRG 483. For the convenience of the reader, we have listed in table 6k of the Addendum to this final rule all the mouth, larynx, and pharynx disorder diagnosis codes that will cause a tracheostomy case to be assigned to DRG 482.

Comment: Two commenters observed that a problem may exist for tracheostomy patients who are transferred during the course of treatment. These commenters present a hypothetical case of a trauma victim who receives a tracheostomy upon admission, is stablized, and then transferred to a tertiary care center where the patient could remain for 2 months or longer, with a significant portion of that time on mechanical ventilation. The commenters complain that once the patient is transferred, the discharge cannot be classified in a tracheostomy DRG.

Response: The secenario described by the commenter raises several issues. First, our policy is to consider only the procedures actually performed at the hospital in assigning cases to their respective DRGs. This is a fundamental principle of the DRG classification system that allows us to classify patients based on information that is presented on the bill. Any deviation from this principle, such as to recognize a tracheostomy that was performed elsewhere prior to admission, would not be appropriate and would be impractical to administer since it would require associating bills from different inpatient stays.

Secondly, effective with discharges occurring in FY 1990, we modified DRG 475 so that transfer cases with a prior tracheostomy would be assigned to this DRG if certain conditions were met. (Prior to FY 1990, such cases could not be assigned to DRG 475 because both intubation and mechanical ventilation were required for assignment and the intubation was usually performed elsewhere prior to the patient's transfer.) The new tracheostomy DRGs will not affect the assignment of these cases.

A patient who receives a tracheostomy in one facility and is then transferred to another will be treated in the same manner as under the current system. Specifically, the stay in a second hospital will not be assigned to a tracheostomy DRG since the procedure was not performed at the second hospital and cannot be coded on the hospital's bill. When a patient with an established tracheostomy is transferred, the second hospital is paid under DRG 475 only if the principal diagnosis is classified in MDC 4, the patient receives mechanical ventilation, and no operating room procedures were performed during the stay in the second hospital.

Although our current payment policy on transfer cases that had a tracheostomy performed prior to admission is an improvement over the policy in effect before FY 1990, we recognize that payment may still be inadequate for cases that do not meet the conditions for assignment to DRG 475 and for those cases that involve prolonged mechanical ventilation. As indicated below in response to other commenters, we are continuing to review these situations in an effort to improve our payment policies for ventilator patients who consume more than average resources.

Comment: Several commenters expressed regret that although we were improving payment for tracheostomy cases, we failed to expand other mechanical ventilation cases beyond MDC 4 and DRG 475. These commenters encouraged us to institute a policy for mechanical ventilation similar to the proposed classification for tracheostomy cases, addressing the unresolved issue of medical patients placed on mechanical ventilation who do not have a tracheostomy and who do not have a principal diagnosis in MDC 4. It was recommended that we give priority to completing research on possible additional mechanical ventilation categories for cases outside MDC 4.

Response: As stated in the proposed rule, cases with MDC 4 principal diagnoses and mechanical ventilation currently classify to DRG 475 if no surgical procedure or tracheostomy is performed. As stated at that time, we are continuing to analyze resource consumption for nontracheostomy, ventilator-assisted patients in medical DRGs outside MDC 4. We did not propose any changes for mechanical ventilation as our analysis was not complete. We are continuing the analytic work on these cases to determine if it is appropriate to develop DRGs similar to those proposed for tracheostomy cases.

Comment: Other commenters expressed concern about the time spent on ventilation as a distinguishing factor in resource consumption. One commenter recommended that the basis for DRG assignment be the presence of both a diagnosis of severe respiratory compromise (diagnosis codes 518.81, 518.82, 799.0, and 799.1) and mechanical ventilation (procedure code 93.92). The commenter states that this would capture patients who are experiencing a severe, life-threatening respiratory disorder and are also being mechanically ventilated. This would preclude the need to identify the time a patient was mechanically ventilated.

Response: We gave considerable thought to the recommendation to use time on mechanical ventilation as a proxy for resource consumption, and to use length of time to distinguish routine surgical mechanical assistance from the more extensive care associated with prolonged ventilation. As stated in the proposed rule, we have no way to identify the length of time spent on mechanical ventilation. Over the past year, the ICD-9-CM Coordination and Maintenance Committee reviewed whether it would be appropriate to change the ventilator procedure codes to reflect the length of ventilator time. A number of approaches were suggested. The committee decided against making any changes effective October 1, 1990 due to lack of empirical evidence supporting appropriate time intervals.

We are continuing to consider and research this issue of mechanical

ventilation time in an effort to address the concerns of hospitals that ventilator-assisted patients consume above average resources.

We have analyzed data using respiratory failure diagnosis codes 518.81, 518.82, 799.0, and 799.1 and mechanical ventilation code 93.92. While this distinction served to identify a class of patients within MDC 4, respiratory failure was not coded with enough consistency in other MDCs to be reliable. However, we appreciate the suggestion and will examine this possibility as one component of our continuing analysis.

d. Multiple Significant Trauma. The DRG classification system has received considerable criticism because there are no DRGs designed for multiple trauma cases. There is an MDC for injuries, poisoning, and toxic effects of drugs (MDC 21) that contains several surgical DRGs for injuries and three medical DRGs for multiple trauma. However, most injury and trauma cases group to one of the other MDCs based on the body system affected by the principal diagnosis. Multiple trauma cases tend to be extremely resource intensive and to incur long lengths of stay. Because these cases are assigned to DRGs based on principal diagnosis, they are included in DRGs with other generally less expensive cases and, thus, tend to receive Medicare payments that are far less than the cost of treating the case.

We proposed to create a new MDC 24 (Multiple Significant Trauma) with three surgical DRGs (DRG 484 through 486) and one medical DRG (DRG 487) to classify multiple significant trauma cases. We proposed to assign these cases to DRGs 484 through 487 after assignment of cases to bone marrow and liver transplant and tracheostomy DRGs and before cases are assigned to the current MDCs. Patients with a principal diagnosis of trauma (diagnosis codes 800.00–904.9; 910.0–929.9, and 950.0–959.9) group to a multiple trauma MDC if at least two significant trauma diagnosis codes from two different body site categories are reported as either principal or secondary diagnoses. We proposed to recognize eight different body site categories; head, chest, abdomen, kidney, urinary, pelvis and spine, upper limb, and lower limb.

Based on HCFA data analysis, the following DRG groupings were proposed for multiple significant trauma:

DRG 484 Craniotomy for Multiple Significant Tauma
DRG 485 Hip, Femur and Limb Reattachment Procedures for Multiple Significant Trauma
DRG 486 Other OR Precedures for Multiple Significant Trauma
DRG 487 Other Multiple Significant Trauma

As proposed, the OR procedures allowed for MDC 24 would be all of the OR procedures allowed for MDC 21 plus OR procedure codes 01.21, 01.42, 01.51, 01.6, and 02.14. If an OR procedure other than one of these is performed, the case will be assigned to DRG 468 (Extensive OR Procedure Unrelated to Principal Diagnosis), DRG 476 (Prostatic OR Procedure Unrelated to Principal Diagnosis), or DRG 477 (Non-Extensive OR Procedure Unrelated to Principal Diagnosis). We proposed that multiple significant trauma cases with no OR procedure would group to DRG 487.

For purposes of clarity and to lessen confusion concerning the DRGs to which multiple trauma cases group, we proposed to revise the titles of the current DRGs 444, 445, and 446 (Multiple Trauma) in MDC 21 to Traumatic Injury.

We received many comments supporting and approving our proposed multiple significant trauma DRGs. All of the comments received regarding multiple significant trauma included a favorable statement. We did, however, receive several suggestions on ways to improve these DRGs.

Comment: Commenters recommended that we consider creating a new DRG to describe multiple injuries within one anatomic area. These commenters observed that multiple injuries occur both within a single body area as well as in two or more body sites, and that these patients consume more resources than those with single organ injuries within the same anatomic area. As the proposed DRGs do not address multiple organ injury within one body system, an additional DRG indicating multiple significant injuries within one body site was recommended.

Response: Patients group to MDC 24 with a principal diagnosis of trauma (diagnosis codes 800.00–904.9, 910.0–929.9, and 950.0–959.9) and at least two significant trauma diagnosis codes (either as principal or secondary) from different body site categories. The eight different body site categories and diagnosis codes associated with each category are set forth in Table 6h of the addendum to this final rule. Operationally, this classification groups patients to MDC 24 if they have a principal diagnosis of significant trauma from one body site and a secondary significant trauma from another body site or a principal diagnosis of trauma that is not on one of the body site significant trauma lists and two secondary diagnoses of significant trauma from different body sites.

HCFA data analysis for these multiple trauma cases substantiated the New York study results: These cases did in fact consume more resources than other cases in the DRGs to which they group under current classification. Variation was reduced, as measured by the coefficient of variation (the standard deviation divided by the mean), thus increasing homogeneity. The creation of these DRGs reduces the variance both in the new DRGs and in the DRGs from which these cases were drawn. To date, the Medicare data have not supported the development of similar DRGs for multiple trauma to a single body site. The reduction in variability in the cases remaining in the original DRGs to which trauma cases have been previously grouped was significant enough to be considered sufficient improvement at this time.

We will be evaluating the performance of the multiple trauma DRGs. As one component of this analysis, we will examine the relative resources required for multiple trauma to a single body site.

Comment: Two comments were received concerning emergency room care and trauma payment. Both observed that trauma diagnoses and treatment are often buried in nontrauma DRGs where the emergency care component of trauma resource consumption is poorly recognized. These commenters indicated the emergency room component of trauma resource consumption merited recognition.

Response: DRG weights are calibrated based on charges submitted on Medicare claims. If a beneficiary receives emergency room services and is subsequently admitted as an inpatient before midnight of the following day, the emergency room services are covered under part A and the charges are included on the inpatient bill. To the extent that emergency room charges are entered on the inpatient bill, they are part of total charges and included in establishing the weight for the relevant DRGs. Given the traumatic nature of the cases that will be assigned to MDC 24, we would anticipate that most, if not all would be emergency admissions.

Comment: We received several comments with recommendations that related to specific proposed DRGs for multiple trauma. One commenter observed that the New York State multiple significant trauma DRGs have two medical DRGs as compared to the one medical DRG being proposed for Medicare.

Response: When we analyzed Medicare data using the New York model, we found that the two New York medical DRGs for Head, Chest and Lower Limb Diagnoses of Multiple

Significant Trauma and Other Diagnoses of Multiple Significant Trauma were similar in terms of length of stay and charges for the Medicare population. Clinically, there was no reason to maintain separate groups. Therefore, the decision was made to form only one medical DRG, DRG 487 (Other Multiple Significant Trauma).

Another difference between the HCFA Multiple Significant Trauma DRGs and the New York model is in the sequencing for patients with multiple significant trauma that require a tracheostomy. The New York Grouper assigns these cases to the Multiple Significant Trauma DRGs. Under the Medicare GROUPER, these cases will be assigned to the Tracheostomy DRGs 482 and 483 rather than the Multiple Significant Trauma DRGs. The net effect of this difference is to reduce the range of variance in the charges and length of stay in the Medicare Significant Multiple Trauma cases, since the typical tracheostomy case requires greater resources than the typical multiple trauma case.

Comment: HCFA should broaden DRG 484 (Craniotomy for Multiple Significant Trauma) to include "Multiple Significant Trauma with Significant Head Injury, with or without Craniotomy," as only a fraction of multiple-injured patients with head injuries undergo a craniotomy.

Response: We will be cognizant of the classification concerns expressed by the commenter as we evaluate the performance of the multiple significant trauma DRGs. For FY 1991, head injury cases without craniotomy will group to DRG 486 (Other OR Procedures for Multiple Significant Trauma), or to DRG 487 (Other Multiple Significant Trauma) if no defined multiple trauma procedure is performed. If future data analysis reveals that these cases have charges and lengths of stay that more nearly pattern those of cases in DRG 484 (Craniotomy for Multiple Significant Trauma) than the cases in the DRGs to which they are assigned, we will consider this recommendations. Initial analysis prior to proposing the new DRGs indicated that the New York model served to improve homogeneity for multiple trauma cases. The performance of these DRGs in the next 2 years may indicate that further modifications are necessary.

Comment: One commenter suggested that DRG 485 (Hip, Femur, and Limb Reattachment Procedures for Multiple Significant Trauma) should be redefined to specify just hip replacement as this is the most common procedure and femur and limb reattachment procedures are rare. Another commenter stated DRG 485 should be redefined into two separate DRGs, "Hip and Femur Procedures for Multiple Significant Trauma", and "Limb Reattachment Procedures for Multiple Significant Trauma", limb reattachment procedures being rare and hip and femur procedures more common in the elderly.

Response: We are aware that limb reattachment procedures are rare. However, they resemble most closely other diagnoses within DRG 485 (Hip, Femur, and Limb Reattachment Procedures for Multiple Significant Trauma). Of the cases grouping to proposed DRG 485, 88 percent are for hip and femur except major joint procedures. Whenever possible, we prefer to group patients that are similar clinically and in terms of resource consumption, rather than create a number of separate DRGs containing relatively few cases. Our analysis does not support a DRG to include only limb reattachment and femur procedures. In addition, our analysis indicates that these cases are similar in charges and length of stay to the hip procedure cases that group to DRG 485.

We do agree, however, that the title of DRG 485 lacks clarity. Therefore, we are changing the title to "Limb Reattachment, Hip and Femur Procedures for Multiple Significant Trauma."

Comment: In the interest of clarity, one commenter suggested that the title of DRG 487 (Other Multiple Significant Trauma) be revised to read "Other Significant Trauma Not Requiring Operation".

Response: DRGs, insofar as possible, are labelled succinctly and clearly. We attempt to convey as much information in the title as is necessary to understand the classification without including all the detailed information necessary to assign a case to that DRG. Sometimes it is necessary to distinguish between DRGs by including more detail. This is the case with, for example, DRG 51, Salivary Gland Procedures except Sialoadenectomy. The most common distinction between DRGs are age and presence of CCs. We do not feel it is necessary to define DRG 487 as Other Significant Trauma Not Requiring Operation since the original title (Other Significant Trauma) is adequate to describe the basis for what will be included in that classification.

Comment: One commenter believes that the diagnoses assigned to the various body sites for purposes of the multiple trauma DRGs should be revised. This commenter maintains a data base on multiple trauma cases that he has offered to share with us.

Response: The data we used in analyzing the revised DRGs are the FY 1989 MEDPAR data, which are the most recent complete data we have available. Hospitals and other interested parties collect data for a variety of purposes and subjects. HCFA makes use of many of these sources in the course of evaluation and analysis, and we intend to explore other analyses of trauma cases as part of our on-going effort to improve the DRG classification system. However, we note that, for policy decision-making, we use internal data sources based only on Medicare discharges. Thus, we ensure, and assume responsibility for, data consistency and accuracy and appropriateness of the DRGs and relative weights for the Medicare population.

Comment: Among the comments received regarding Multiple Significant Trauma were several references to the use of Medicare DRG grouping methods by other payers for non-Medicare patient populations. Commenters were concerned that Medicare DRGs serve as models for other payers and populations and that HCFA must be cognizant of this fact. One commenter recommended that we qualify or withdraw our statement that the proposed categories are "homogeneous" and "would improve payments under other insurance programs that have adopted the Medicare DRG classification system." (55 FR 19431.)

Response: HCFA is well aware that its DRG classification system serves as a model for other reimbursement groups and routinely cautions other payers that our DRG weights and groupings are based on Medicare patient data and may not be appropriate for other classes of patients. However, in the case of the Multiple Significant Trauma DRGs, these were modeled after New York Multiple Significant Trauma DRGs, which is an all-payer system. Therefore, this classification methodology has already demonstrated improvements under other insurance programs. Using MEDPAR data, we measured variance within and between the DRGs, both prior to mutiple trauma groupings and after assigning cases based on the proposed DRGs. The classification system for multiple significant trauma served to reduce variance; therefore, establishing the DRGs for Multiple Significant Trauma results in more homogeneous grouping of Medicare patients.

Comment: One commenter stated that the averaging process used to create DRG weights poorly serves the bi-modal and tri-modal distribution of many trauma patient populations, and

prejudices those trauma centers that treat the most severely injured patients.

Response: While it is true that the averaging system could potentially present difficulties for hospitals who systematically treat more severely ill patients and not an average mix of patients, there is no empirical evidence to document that this problem is more unique to the multiple significant trauma DRGs than other DRGs.

Comment: One commenter raised questions regarding the logic and consistency of the procedures assigned to the three significant multiple trauma DRGs 484, 485, and 486. This commenter questioned why some craniotomy procedures group to DRG 484 and some hip, femur, and limb procedures group to DRG 485 while other craniotomy procedures as well as other hip, limb, and femur procedures will be assigned to DRG 486. This commenter was concerned that DRG 486 consists of disparate procedures, resulting in a lack of statistical and clinical homogeneity within that DRG.

Response: As noted above, the multiple significant trauma DRGs proposed by HCFA are modeled on the New York State DRGs; we relied to an extent on the data analysis conducted by 3M/HIS for New York in forming our decision for assigning cases to multiple trauma DRGs. The New York classification of cases followed the guidelines provided by the Condensed Abbreviated Injury Scaling (CAIS) chart, which has proven valuable for prospective clinical injury scoring. Early prospective clinical injury scoring is a process whereby an objective measure of the severity of a patient's injuries starts to be formulated soon after admission. As more information becomes available, a definitive injury severity score is calculated. Use of this scale permits grouping trauma cases by level of severity and by body site.

The assignment of certain craniotomy procedures to DRG 484, while others went to DRG 486, was determined by the similarity of resource intensity and clinical severity judged by our medical consultants and the CAIS chart assignment by level of severity. The high cost, service-intense craniotomy procedures were assigned to DRG 484, which has the highest weight of the multiple significant trauma DRGs. While we agree that the procedures assigned to DRG 486 are not anatomically similar, they do resemble each other in terms of measures of resource consumption and in levels of severity. This is true, also, for the Hip, Femur and Limb Reattachment procedures that group to either DRG 485 or 486. While most of the hip procedures are found in DRG 486, this DRG has a higher weight than DRG 485. The hip procedures assigned to DRG 485 were more similar in charges and level of severity to the other procedures found in that DRG.

We plan to evaluate the assignment of cases to the multiple significant trauma DRGs during the coming 2 years. We appreciate the comments and questions that have been raised in regard to these cases and will continue to examine them in our analysis.

e. Human Immunodeficiency Virus (HIV) Infections. We have been evaluating the impact on the Medicare population of the increasing number of cases with human immunodeficiency virus (HIV) infections to ensure that payment under the DRG classification system for these patients is appropriate.

HIV infections are identified by diagnosis codes 042.0—042.9 (HIV infection with specified conditions), 043.0—043.9 (HIV infection causing other specified conditions), and 044.0—044.9 (Other HIV infection). Currently, cases that have one of these codes as the principal diagnosis are assigned to DRGs 398 or 399 (Reticuloendothelial and Immunity Disorders) in MDC 16 (Diseases and Disorders of the Blood and Blood Forming Organs and Immunological Disorders).

Our analysis of FY 1987 and FY 1988 MEDPAR data showed that HIV-infected patients were distributed across a number of DRGs and that their costs were significantly higher than other patients within the same DRG. In addition, we found that surgical patients differed noticeably from medical patients in terms of resource consumption as measured by total charges.

Because of the substantial increase in HIV infection cases and our analysis of the charge data for these cases, we believe that it is now appropriate to establish separate DRGs for HIV cases. Based on our analysis of FY 1989 MEDPAR data, we proposed to add a new MDC 25 (Human Immunodeficiency Virus Infections) with three DRG categories for HIV-infected patients. These classifications are as follows:

DRG 488 HIV with Extensive OR Procedure
DRG 489 HIV with Major Related Condition
DRG 490 HIV with or without Other Related Condition

We proposed to limit the HIV-related conditions to those identified by the Centers for Disease Control (CDC). These conditions, which were originally set forth in CDC's Official Authorized Addendum to ICD-9-CM (Revision No. 1) effective January 1, 1988, are listed in Volume 1 in the "Includes Only" notes under diagnosis codes 042.0, 042.1, 042.2, 043.1, 043.3, and 044.0.

We proposed to assign cases to MDC 25 prior to the current MDC classifications, but after cases have been grouped to the liver and bone marrow transplant, tracheostomy, or multiple significant trauma DRGs.

We proposed that the OR procedures allowed for DRG 488 would be all OR procedures other than nonextensive OR procedures. Nonextensive procedures are those OR procedures that result in assignment to DRG 477 when the procedure is unrelated to the principal diagnosis. (See discussion below in section III.B.8 of this preamble regarding changes to DRG 477.) We proposed that surgical cases with only a nonextensive OR procedure and medical cases would be assigned to DRG 489 or 490 based on the HIV-related condition. If the HIV-related condition involves a disease or disorder of the central nervous system, a malignancy, an infection, or other major related condition, we proposed to assign the case to DRG 489. We proposed to assign the remaining cases, HIV infection with and without an HIV-related condition, to DRG 490.

Comment: We received several comments supporting our proposed DRGs for patients with HIV infection. While the majority of comments were overwhelmingly favorable, one commenter believes that we have not demonstrated that HIV patients could be grouped sufficiently well for payment purposes, that the number of groups is inadequate, and that there is no category for children with HIV. The commenter stated that the appropriateness of categories to all age patients should be identified, and if all age groups have not been studied, this should be acknowledged.

One other commenter referred to the inadequacy of three DRG groups to accommodate the variable diagnoses, treatments, and related services presented by HIV patients. This commenter referred to the fact that New York, whose classification methodology served as a model for many of our proposed modifications and DRGs, has 12 HIV DRG categories. The limit of three is felt by this commenter to result in inequitable payments to hospitals due to the significant variance in the costs for the cases grouped together.

Response: Our evaluation of 3 years of data, using MEDPAR FY 1987, FY 1988, and FY 1989 data, documented the need for and feasibility of DRGs specific to HIV infection. We used our standard method of analysis, basing decisions on statistical findings and clinical cohesiveness. To the extent possible, the

HIV infection discharges were studied and determined to be manageable as an MDC. The issue of including a DRG for children with HIV infection is not relevant for the Medicare population. The majority of Medicare beneficiaries are 65 years of age or older. There is a Medicare benefit available on the basis of disability. This, however, is a small group with an even smaller number of children represented. While there are an increasing proportion of patients under 65 years of age with HIV infections appearing in our MEDPAR data, the distribution of cases by age demonstrated there was only one patient in the data who would classify as "child" (16 years of age). To attempt age category designations would not be feasible on the basis of case frequency in the MEDPAR data. We note that although the current DRGs include some DRGs specific to children under age 17, these are generally low volume DRGs whose weights were established at the outset of the Medicare program based on non-Medicare data from Michigan and Maryland hospitals. We have not supplemented our MEDPAR data with updated non-Medicare data since the initial weights for these low volume DRGs were established nor have we established any additional low volume DRGs. Those commenters who are interested in HIV categories related to age might consider the New York State model.

New York State does indeed have 12 HIV DRGs as pointed out by the commenter. The criteria determining the grouping, after principal and secondary diagnoses, are age and opioid use. We do not believe that either of these criteria are appropriate to the Medicare population. New York State developed their classification methodology to serve an all payer (except Medicare), system that encompasses all age groups. The first grouping under the New York method selects patients under 29 years of age, the second selection criterion is neonatal diagnosis, thus creating two DRGs for newborns. Children born with HIV infections will go to one of these DRGs. The third selection is based on a principal diagnosis of HIV infection with a principal diagnosis of significant HIV related condition. These HIV cases are then further subdivided based on age (13 years) and opioid use. The objective for New York was to be able to identify HIV infections related to intravenous drug use and patient age. The classification system determined to best fit the Medicare population was the one proposed, representing surgical cases, cases with major HIV-related conditions, and other HIV cases. We recognize that the medical HIV DRGs are not as homogeneous as the surgical DRG; this pattern holds across DRGs in general. We will be monitoring the performance of the HIV DRGs, evaluating the variance within and between groups, and will consider modifications as they prove necessary based on empirical data and clinical judgment.

Comment: ProPAC agreed that the proposed HIV DRGs are an improvement and will both allow these cases to be clearly identified and provide a mechanism for accommodating future treatment changes. However, ProPAC referred to results of the Commission's data analysis. Using FY 1987 and FY 1988 MEDPAR data, ProPAC found that, among cases with HIV as a secondary diagnosis, there did not appear to be significant payment problems, although cases with a principal diagnosis of HIV infection appeared to be more costly and underpaid relative to other cases in the DRGs to which HIV cases were assigned (DRGs 398 and 399).

Response: HCFA data analysis, preliminary to proposing the development of DRGs specific to HIV infections, was based on FY 1989 MEDPAR data, as well as FYs 1987 and 1988. Some of our findings were similar to ProPAC's: Cases with a principal diagnosis of HIV infection incurred charges and lengths of stay that were, on average, higher than other cases in the same DRGs. However, we found that cases with a secondary diagnosis of HIV infection with a principal diagnosis from the CDC list of HIV-related conditions, on average, also incurred higher charges than other cases in the same DRG. Although this difference was not as significant when HIV was secondary, our DRG classification decisions are based on clinical as well as empirical data. Our medical experts evaluated the HIV infection cases both as principal and as secondary diagnoses and believe these cases would be best served by creating DRGs for all HIV cases regardless of the sequencing of the diagnoses. However, if HIV infection is reported as the secondary diagnosis, the case will be assigned to one of the HIV DRGs only if the principal diagnosis is on the CDC list of HIV-related conditions.

Comment: One commenter expressed concern that HIV cases might receive less payment in DRG 489 or 490 as opposed to the DRGs that recognize the extensive surgical procedures performed with many of these cases. Another commenter objected to the creation of a surgical split for HIV cases since most major operating procedures performed for HIV cases are not related to the HIV illness and a principal diagnosis unrelated to HIV is usually indicated.

Response: MDC 25 cases with extensive surgery will not be assigned to DRG 489 or 490, but will be assigned to DRG 488, with a weight of 4.1296. An examination of the surgical DRGs to which these patients would be grouped in the absence of the new groupings shows that the volume of HIV surgical cases are from DRGs that are weighted significantly lower than DRG 488. Nonextensive procedures performed on HIV patients that would have grouped to DRG 477 will be assigned to DRG 489 or 490, depending on the presence of a major HIV-related condition.

As for the case of surgical procedures for patients with a principal diagnosis unrelated to HIV infection, these cases will be classified on the basis of the principal diagnosis and will not be considered HIV infections or HIV-related diagnoses. Patients with a principal diagnosis of HIV infection, or a secondary diagnosis of HIV infection with a principal diagnosis of an HIV-related condition who underwent an extensive surgical procedure, although smaller in number, were found to have substantially higher charges than patients receiving medical treatment only.

Comment: We received a few comments that indicated confusion as to the grouping and sequencing of HIV infections and HIV-related conditions. ProPAC commented on the assignment of cases to MDC 25 that have an HIV-related diagnosis code on the "includes only" list of the reported HIV code, stating that cases should group to MDC 25 with HIV infection diagnosis codes of 042.9, 043.9, 044.9 as well. Another commenter questioned whether for assignment of cases to DRGs 488, 489, and 490, the HIV infection code (042.0 through 044.9) should be sequenced in either principal or secondary diagnosis positions on the bill, and whether major or other related diagnoses could be either principal or secondary diagnoses. One commenter found it difficult to comment on the proposed HIV DRGs, as specific instructions on how the cases would be grouped were not available.

Response: In response to ProPAC's concern about assigning cases to MDC 25 without regard to whether it is on the "includes only" list of the reported HIV code and to also assign cases that have HIV codes of 042.9, 043.9 and 044.9 to MDC 25, we believe that clarification is necessary to understand the assignment of cases and the role of the "includes only" HIV-related conditions. The

diagnoses codes that have been approved by CDC as HIV-related conditions are found in Volume One, International Classification of Diseases, under the diagnosis codes 042.0, 042.1, 042.2, 043.0, 043.1, 043.3, and 044.0. We did not intend, for DRG grouping purposes, that only these HIV codes (042.0, 042.1, 042.2, 043.0, 043.1, 043.3, and 044.0) would be considered. The HIV DRGs accept cases with a diagnosis code of 042 through 044, including all fourth digit categories, when one of these codes is principal diagnosis, or when one of these codes is secondary with an HIV-related condition (as approved by CDC) as principal diagnosis.

In answer to the questions concerning placement of the codes on the bill, the HIV infection code (042.0–044.9) may be sequenced in either the principal or secondary diagnosis positions. Coders should continue to follow existing coding guidelines, coding as principal the diagnosis that, after study, has been established as the condition that occasioned admission to the hospital. Secondary diagnoses associated with the current hospital stay are defined as those conditions that coexist at the time of admission, that develop subsequently, or that affect the treatment received or the length of stay, or both. Diagnoses that relate to an earlier episode that have no bearing on the current hospital stay are not to be included. For DRG grouping purposes, the HIV-related diagnosis may be either principal or secondary diagnoses, as appropriate by coding definition.

The grouping of cases with HIV infections is as follows:

DRG 488—Principal diagnosis of 042.0–044.9 or secondary diagnosis of 042.0–044.9 with a principal diagnosis of an HIV-related condition, and an extensive operating room procedure.

DRG 489—Principal diagnosis of 042.0–044.9 and a secondary diagnosis of a major HIV-related condition or a principal diagnosis of a major HIV-related condition and a secondary diagnosis of 042.0–044.9.

DRG 490—Principal diagnosis of 042.0–044.9 and either a secondary diagnosis of a nonmajor HIV-related condition or no HIV-related secondary diagnosis, or a secondary diagnosis of 042.0–044.9 and a principal diagnosis of a nonmajor HIV-related condition.

The HIV-related conditions and their designation as major or nonmajor are listed in table 6i of the Addendum of this final rule. We believe that this table coupled with the above description should be sufficient direction to allow grouping of these cases.

Comment: Several commenters recommended further consideration of CC conditions related to HIV infections. One commenter recommended that HCFA continue research on HIV infection classification, giving particular consideration to a CC hierarchy. Another suggested the New York model using HIV cases with surgery as a major CC, while another suggested that DRG 490 be split into two separate DRGs: One for HIV infection with CC and one for HIV infection without CC.

Response: We are conducting a thorough evaluation of several methods of measuring severity of illness, including methods using CCs as proxy measures of severity. Among the measures under considerations are the Yale Refined DRG Study and the New York State methodology, both of which use CCs to form distinctions between DRGs. Yale formed DRG groups based on CCs that represent different levels of resource use; New York created major, catastrophic CCs that apply across all DRGs. We are also evaluating our existing CC structure to determine what, if any, modifications would improve homogeneity within DRGs, serve as measures of severity, and enhance our ability to predict resource consumption.

One component of our continuing evaluation of DRG performance, will contain analysis of the necessity and feasibility of further breaks in the HIV DRGs, including DRG 490 with and without CCs.

Comment: We received two requests to expand the list of HIV-related conditions that would be considered for assignment to the proposed HIV DRGs as principal diagnosis when HIV infection was secondary. These commenters suggested that there are other significant diagnoses, such as circulatory and cardiac conditions, gastrointestinal conditions, or other conditions that may co-exist with HIV, adding significantly to the cost of care. Another mentioned that New York recognized additional diagnoses not designated by CDC.

Response: In the proposed rule, we noted that CDC was reviewing its list of HIV-related conditions and might make some revisions. We also stated that, if time permitted, we would include any changes in the final GROUPER for FY 1991. At this time, the National Center for Health Statistics (NCHS), CDC is evaluating the current listing of HIV-related conditions, the New York list of HIV-related conditions, and other diagnoses that, in their experience, increase service intensity in association with HIV infection. Any HIV-related conditions that NCHS, CDC recommends for inclusion in Volume One and Volume Two, International Classification of Diseases, will be presented at the December 1990 meeting of the ICD–9–CM Coordination and Maintenance Committee. Questions and comments concerning HIV-related conditions may be directed to:

Sue Meads, R.R.A., Co-Chairperson, ICD–9–CM Coordination and Maintenance Committee, National Center for Health Statistics, room 9–58, 6525 Belcrest Road, Hyattsville, Maryland 20782.

If additional conditions are authorized as HIV-related, the HCFA list will be expanded to include them in FY 1992. We are working closely with NCHS, CDC to ensure that our classification scheme is as current and inclusive as possible.

3. MDC 5: Diseases and Disorders of the Circulatory System

Noting the classification and sequencing problems that have developed in MDC 5, we proposed to revise the logic of MDC 5 to return to a clinical partitioning more like the original FY 1984 partitioning. The reporting of extracorporeal circulation or bypass pumps in open heart surgery was not required until we revised the DRGs in FY 1986, in part, to overcome our inability to distinguish open from closed angioplasty procedures, all of which were, at that time, reported under procedure code 36.0. That is, DRGs 103 through 108 included by definition procedures that were generally performed with the pumps, and DRGs 109 through 112 included those that were generally not performed with one. Now that there are distinct codes for open and closed angioplasty procedures, we proposed to eliminate the requirement to code the pump (code 39.61) in order to be assigned to DRG 108 and reassign the codes in that DRG that are generally not considered to require the pump. Where this distinction is not clear, we have made the classification based on clinical coherence and resource utilization. We also proposed to create a new DRG 112 that includes percutaneous cardiovascular procedures (that is, percutaneous transluminal coronary angioplasty (PTCA) (codes 36.01, 36.02, and 36.05), cardiac electrophysiologic (EP) stimulation and recording studies (code 37.26), and cardiac mapping (code 37.27)).

Based on consultation with our medical advisors, we proposed to reclassify the procedures currently assigned to DRGs 108 through 112 as follows:

- Cardiothoracic procedures.
- Major cardiovascular procedures.
- Other vascular procedures.
- Percutaneous cardiovascular procedures.

Based on clinical and charge data review, we proposed that the major cardiovascular and other vascular procedure groups be split on the basis of CCs. We also considered whether a more clinically coherent group would be formed by splitting the cardiothoracic procedures on the basis of whether or not cardiac catheterization was performed in the same operation. However, no significant difference was found between the two categories. Therefore, we did not propose a split.

The resulting DRGs are quite similar to those in MDC 5 in the original GROUPER (FY 1984 and FY 1985) with the addition of the separate DRG for percutaneous procedures and classification changes based upon ICD-9-CM code categories introduced since FY 1986.

The proposed revision did not change the logic in DRGs 104 through 107 and DRGs 113 through 145, except in the surgical hierarchy for MDC 5, which is described below. We have removed mention of the pump from all DRG titles. We also proposed a code assignment correction for DRGs 115 and 121, as described in section III.B.5 of this preamble, below.

In order to accommodate the changes, we proposed to delete DRG 109 and add two new DRGs (478 and 479). In addition, we proposed to assign thoracoabdominal aortic aneurysm repair (TAAA) to DRG 108 when both of the following procedures are performed during the same operation.

38.44—Resection of vessel with replacement, aorta, abdominal.

38.45—Resection of vessel with replacement, thoracic vessel.

Cases involving a single resection procedure would be reassigned to proposed DRG 110 and 111. This procedure code category was revised effective October 1, 1986 to add a "Code also" note to require both codes if the procedure involved the thoracic vessel and the abdominal aorta. The "Code also" ICD-9-CM convention in the Tabular List requires that all procedures be coded when they represent components of a procedure that are accomplished at the same time, and no common classification for the combination exists.

The revised DRGs and their titles are as follows:

DRG	Description
104	Cardiac Valve Procedures with Cardiac Catheterization.
105	Cardiac Valve Procedures without Cardiac Catheterization.
106	Coronary Bypass with Cardiac Catheterization.
107	Coronary Bypass without Cardiac Catheterization.
108	Other Cardiothoracic Procedures.
109	No longer valid.
110	Major Cardiovascular Procedures with CC.
111	Major Cardiovascular Procedures without CC.
112	Percutaneous Cardiovascular Procedures.
478	Other Vascular Procedures with CC.
479	Other Vascular Procedures without CC

Based on our proposed changes and preliminary recalibration of the DRGs, we proposed the following surgical hierarchy for MDC 5. (For a detailed discussion of surgical hierarchy, see section III.B.6 below.)

DRG	Description
103	Heart Transplant.
104 and 105	Cardiac Valve Procedures.
108	Other Cardiothoracic Procedures.
106 and 107	Coronary Bypass.
110 and 111	Major Cardiovascular Procedures.
115 and 116	Permanent Cardiac Pacemaker Implant.
113	Amputation for Circulatory System Disorders Except Upper Limb and Toe.
478 and 479	Other Vascular Procedures.
112	Percutaneous Cardiovascular Procedures.
117 and 118	Cardiac Pacemaker Revision.
114	Upper Limb and Toe Amputation for Circulatory System Disorders.
119	Vein Ligation and Stripping.
120	Other Circulatory System OR Procedures

Comment: The majority of comments that we received on the proposed revision of this MDC were favorable. ProPAC stated that it had not had the opportunity to evaluate the proposed changes, but they appeared to provide more accurate grouping and payment. Representatives of a major teaching hospital and a hospital association noted that the proposed reclassification of the thoracoabdominal aortic aneurysm repair (TAAA) to the new DRG 108 would substantially improve the treatment of TAAA repair under the prospective payment system. They recommended that we retain this change in the final rule.

A national organization representing children's hosptials also approved of the logic but requested that we provide a more detailed presentation of the procedures that would be assigned to each new DRG. In addition, they suggested that HCFA consider whether a different set of names might be appropriate for DRGs 108 , 110, and 111.

Response: We regret the omission of complete listings of the reassigned procedure codes for MDC 5, since this made the review of the changes slightly more time consuming than it needed to be. In this final rule, we have included a complete description of the procedure codes included in each of the revised DRGs. (See Table 6j in the addendum to this final rule.)

One code assignment was changed based upon information provided by the staff of American Hospital Association's (AHA's) Coding Clinic for ICD-9-CM. We had proposed assigning procedure code 36.09 (Other specified removal of coronary artery obstruction) to the revised DRG's 110 and 111, Major Cardiovascular Procedures. The AHA staff, citing coding advice provided in the Coding Clinic for ICD-9-CM (Second quarter 1990), noted that, effective for discharges on or after April 1, 1990, coders are to use 36.09 for coronary artery atherectomy, a percutaneous procedure. Thus, we are revising the assignment of this code to DRG 112, Percutaneous Cardiovascular Procedures. The ICD-9-CM Coordination and Maintenance Committee presented proposals for new procedure codes for coronary atherectomy and angioplasty with placement of stent at the April 23, 1990 meeting. Final recommendations on the codes with not be made until the meeting in the Spring of 1991. In the interim, we believe that DRG 112 is the most appropriate DRG assignment for procedure code 36.09. Comments or requests for information about the proposed ICD-9-CM procedure codes should be directed to:

Ms. Patricia E. Brooks, Co-Chairperson, ICD-9-CM Coordination and Maintenance Committee, HCFA Office of Coverage Policy, room 401 East High Rise Building, 6325 Security Boulevard, Baltimore, Maryland 21207.

The commenter who requested a change in the names assigned to the revised DRGs 108, 110, and 111 did not offer alternatives. We believe that each of the proposed titles is an accurate, clear, and concise description of the procedures assigned to that DRG. Therefore, absent any specific suggested changes, we intend to retain them as the final titles.

Comment: Representatives of two vascular surgery societies requested that the changes to the DRGs in MDC 5 not be implemented as proposed. They estimate that most patients undergoing nonaortic vascular operations require them for treatment of limb ischemia. Based on reviews of hospital data for these surgeries, these commenters have determined that between 53 and 96 percent of the patients require these operations for treatment of limb

threatening ischemia. The proposed reclassification of the nonaortic vascular procedures to DRGs 478 and 479 (Other Vascular Procedures) will result in a 31 to 36 percent reduction in payment to hospitals. They believe that this reduction will virtually eliminate the payment improvement that these high cost cases had realized under the revised outlier policy that was effective November 1, 1988. (See 53 FR 38502.)

The commenters also expressed concern that the ICD-9-CM codes for the procedures and operations required in vascular patients do not reflect current practices. For example, procedure code 39.29 (Other (peripheral) vascular shunt and bypass, NEC) is the only procedure code that can be used for the many and often complex major arterial reconstructions in the lower extremity that are performed for limb salvage. The commenters believe that it may be appropriate to include some of the simpler lower extremity arterial reconstructions, especially those performed for intermittent claudication (rest pain), in a new DRG with a lower relative weight. However, they believe that it is inappropriate to make such an assignment for those cases where the lower extremity arterial reconstruction is a complex one performed for limb threatening ischemia (that is, for gangrene, a nonhealing ischemic ulcer, or severe ischemic claudication). The commenters offered to participate in an evaluation of the ICD-9-CM codes to develop a clearer reflection of the diversity needed in diagnosis and procedure codes to describe these vascular patients.

Response: We regret that we cannot provide any immediate relief to the commenters who expressed concern over the new vascular DRGs. We have reviewed the clinical basis of the new DRG assignments with our medical staff and our conclusion is that the vascular procedures included in the new DRGs 478 and 479 are clinically similar. In addition, the lower extremity arterial reconstruction cases, as a group, are more like the cases assigned to DRGs 478 and 479 than the cases that remain in DRGs 110 and 111. The resulting groups have relatively low variation in charges based on the most recent data available.

The only distinction we can make between the more complex limb salvage surgery and simpler bypass operations using the current ICD-9-CM procedure codes is a breakdown based on the presence or absence of CCs. However, there are not enough of the complex limb salvage cases in the over 65,000 cases classified in DRG 478 to maintain the relative weight that these cases had when they were classified with the other cases in the existing DRGs 110 and 111.

We note that the ICD-9-CM Coordination and Maintenance Committee has undertaken a complete revision of chapter Seven of Volume 3 of the ICD-9-CM, Operations on the Cardiovascular System (35-39). Anyone who wishes to provide information to be used in this review or who has data or suggestions to provide should contact: Ms. Patricia E. Brooks (see address above).

Comment: The manufacturer of the automatic implanted cardioverter defibrillator (AICD) system currently available recommended that AICD replacement cases should be moved from DRG 120 (Other Circulatory System OR Procedures) and be reassigned to their own DRG or to an existing DRG with a weight of at least 3.5897. The commenters believe that this reassignment is necessary to appropriately pay hospitals for the cost of providing AICD replacements. Since DRG 109 was eliminated in the proposed revision of MDC 5, the commenter suggests that AICD cases can be assigned to that DRG.

The commenter has commissioned three separate contractor studies in the last 3 years that concluded that the average standardized charges for AICD replacement cases have been consistently understated in the MEDPAR file. In the latest study, the contractor identified all cases in DRG 120 with procedure code 37.98 (Replacement of automatic cardioverter/defibrillator pulse generator only). Based on a survey of physicians and hospitals that perform this procedure that analyzed the 485 AICD replacement cases in the FY 1988 MEDPAR file, the contractor found that—

- 58 percent of the cases were from hospitals that had never purchased an AICD device, which implies that the ICD-9-CM coding shown on the claim is not correct; and
- 33 percent of the cases were from hospitals that undercharged or never charged for the device.

We also received a large number of other comments from physicians who cited the AICD study and agreed with its recommendations.

Response: In the September 1, 1989 final rule (54 FR 36466), in response to this same commenter, we added the following procedure code pairs to DRG 104 and 105:

- 37.95 (Implantation of automatic cardioverter/defibrillator lead(s) only) and
- 37.96 (Implantation of automatic cardioverter/defibrillator pulse generator only).
- 37.97 (Replacement of automatic cardioverter/defibrillator leads(s) only) and
- 37.98 (Replacement of automatic cardioverter/defibrillator pulse generator only).

However, we also stated that, based on our analysis of FY 1988 MEDPAR data, we believe that the classification of cases with replacement or insertion of AICD leads or pulse generator alone to DRG 120 is appropriate. Our analysis of FY 1989 MEDPAR data continues to support this decision. The FY 1989 standardized charge for the DRG is $14,857 compared to the $15,000 minimum cost estimated in the contractor's study for an AICD replacement case in FY 1988 (based on the cost of the device and a 2-day hospital stay). Even allowing for inflation, the estimated cost for the replacement cases is well within the variation in charges for DRG 120.

The commenter's recommendation to reassign the AICD replacement cases to a DRG with an average weight of 3.5897 is based on an imputed weight for the AICD replacement cases based on the cases in the study with average charges in excess of $15,000 and imputed charges for those cases in which the hospital implanted the device but undercharged or did not charge for the device. The inputed charges were based on the cost of the device plus a 14 percent markup. We do not believe it is appropriate to make DRG classification changes using imputed charges in this manner. We can only assume that what the hospital submits as its charges on each bill are in fact the actual total charges. A hospital is not under any obligation to show charges equal to or greater than its costs for services.

Finally, we share the commenter's concern that the procedure codes for AICD replacement should be properly used. In the September 1, 1989 final rule, we stated that we would furnish the information provided by the commenter about potential improper coding to the PROs for their review. We are currently reviewing the PRO claims review history to determine if the PROs have identified incorrect DRG assignment based on these procedure codes.

Comment: A commenter stated that he believes that proper guidelines for the coding of Holter monitoring with AICD units need to be developed. He cited multiple changes in the coding of the procedure in recent years and requested some simplification in the coding guidelines.

Response: Holter (cardiac) monitoring is currently referenced in Volume 3 of the ICD-9-CM, Index to Procedures, to procedure code 89.54 (Electrographic monitoring). However, at its public meeting on July 26, 1990, the ICD-9-CM Coordination and Maintenance Committee proposed a new code assignment for ambulatory cardiac monitoring (ACM). This code would distinguish between analog devices (Holter monitors) and real-time devices that digitally record the EKG waveform. A new code would not be formally recommended until the Spring of 1991 and, if approved, would not be effective until October 1, 1991. The Committee welcomes comment and information on these code proposals. Interested parties may obtain copies of the minutes of these meetings and offer comments to Patricia Brooks (see address above).

Comment: One commenter wanted to know where patients who have coronary artery bypass surgery (procedures codes 36.10 through 36.19) extracorporeal circulation (procedure code 39.61), and the insertion of an intraaortic balloon pump (procedure code 37.61) will be classified under the new DRGs. The commenter states that these patients would currently be assigned to DRG 108. He noted that, in his experience, patients who have an intraaortic balloon pump are extremely sick, very costly, and have a high mortality rate.

Response: Procedure code 37.61 (Implant of pulsation balloon) will be assigned to DRGs 110 and 111, Major Cardiovascular Procedures. However, if the procedures listed by the commenter are coded on the bill, it would result in the assignment of the case to DRG 107, Coronary Bypass without Cardiac Catheterization, since DRGs 106 and 107 are ranked above DRGs 110 and 111 in the surgical hierachy for MDC 5.

4. Reassignment of Patients with Guillain-Barre Syndrome

Guillain-Barre syndrome (Diagnosis code 357.0) is a postinfectious polyneuropathy in which severely affected patients may require ventilatory assistance and long intensive-care stays. Until now, Guillain-Barre syndrome discharges have been assigned to DRGs 18 and 19 (Cranial and Peripheral Nerve Disorders). In both its March 1, 1989 and March 1, 1990 reports, ProPAC recommended assigning Guillain-Barre syndrome cases to either DRG 20 (Nervous System Infection Except Viral Meningitis) or DRG 34 (Other Disorders of Nervous System With CC) or to a new DRG as more appropriate in terms of resource consumption. ProPAC further recommends that Guillain-Barre patients who receive a tracheostomy would be most appropriately classified with other tracheostomy patients.

We examined this issue as part of our ongoing DRG refinement analysis. Our analysis confirms the finding that the average resource use associated with Guillain-Barre syndrome cases is higher than the average resource use for cases in DRGs 18 and 19. We further evaluated DRGs 20 and 34 to determine which DRG would be most appropriate for Guillain-Barre syndrome patients. Evaluation of clinical coherence by our medical consultants supports the assignment of Guillain-Barre syndrome cases to DRG 20. Analysis indicates that the highest costs incurred by the Guillain-Barre syndrome patients were those with tracheostomies. We proposed to assign all tracheostomy cases to one of two new DRGs as discussed above in section III.B.2 of this preamble. Therefore, we believe that assigning the remaining Guillain-Barre syndrome cases to DRG 20 is also appropriate in terms of resource consumption. Thus, we proposed to move Guillain-Barre syndrome cases from DRGs 18 and 19 to DRG 20.

Comment: We received only two comments on our proposal to move Guillain-Barre syndrome from DRGs 18 and 19 to DRG 20. ProPAC approved the change and acknowledged the move as addressing a long-standing concern of the Commission. The other comment stated that although the proposed move would increase payment for Guillain-Barre syndrome cases, payment would still be inadequate compared with the cost involved in treating these patients.

Response: In response to recommendations from ProPAC, we did a thorough analysis of the cases with a diagnosis of Guillain-Barre, evaluating the impact of these cases in DRGs 18, 19, 20, and 34. Since our results corroborated the finds of ProPAC analysis, we endorsed the proposed change and included it in our changes for FY 1991.

We will continue to monitor the experience of Guillain-Barre cases under DRG 20. If the charges of those cases cause high variation and exceed the average charge significantly, further considerations will be undertaken. We note that, under the prospective payment system, Medicare does not pay for the costs involved in the treatment of any one case. Rather, we pay based on an averaging process, as each DRG contains a range of patient costs and lengths of stay. Given a normal distribution, most cases will incur costs close to the average, with some cases costing less and some costing more. Moreover, the prospective payment system payment does not include capital and other pass-through costs. Therefore, an accurate comparison cannot be made between a hospital's charges for a case and the Medicare DRG payment in order to determine the amount that the payment exceeded or fell short of the cost of treating that case.

5. Hypertensive Heart and Renal Disease.

In the past, a number of individuals have questioned the assignment of the following diagnosis codes:

404.01—Hypertensive heart and renal disease, malignant, with congestive heart failure

404.03—Hypertensive heart and renal disease, malignant, with congestive heart failure and renal failure

404.11—Hypertensive heart and renal disease, benign, with congestive heart failure

404.13—Hypertensive heart and renal disease, benign, with congestive heart failure and renal failure

404.91—Hypertensive heart and renal disease, unspecified, with congestive heart failure

404.93—Hypertensive heart and renal disease, unspecified, with congestive heart failure and renal failure

These diagnoses are currently assigned to DRG 124 (Circulatory Disorder Except AMI, With Cardiac Catheterization and Complex Diagnosis) and DRG 127 (Heart Failure and Shock). The commenters believed that these codes should also be assigned to DRG 115 (Permanent Cardiac Pacemaker Implant With AMI, Heart Failure of Shock) because patients with these conditions are potential candidates for pacemakers. We agree and proposed the additional assignment of these codes to DRG 115. We also proposed to add these codes to DRG 121 (Circulatory Disorders with AMI and Cardiac Vascular Complication, Discharged Alive) because they describe clinical conditions that are comparable to other conditions that are considered cardiovascular complications already included in DRG 121 (for example, congestive heart failure (code 428.0)). We received no comments on these changes and are adopting them as proposed.

6. Surgical Hierarchies

Some inpatient hospital stays entail multiple surgical procedures, each one of which, occurring by itself, could result in assignment of the case to a different DRG within the MDC to which the particular principal diagnosis is

assigned. It is therefore necessary to have a decision rule by which these cases are assigned to a single DRG. The surgical hierarchy, an ordering of surgical classes from most to least resource intensive, performs that function. Its application ensures that cases involving multiple surgical procedures are assigned to the DRG associated with the most resource-intensive surgical class.

Because the relative resource intensity of surgical classes can shift as a function of DRG reclassification and recalibration, we reviewed the surgical hierarchy of each MDC, as we have for previous reclassifications, to determine if the ordering of classes coincided with the intensity of resource utilization, as measured by the same billing data used to compute the DRG relative weights.

A surgical class can be composed of a single DRG or more than one DRG. For example, in MDC 5, the surgical class "heart transplant" consists of a single DRG and the class "coronary bypass" consists of two DRGs. Consequently, in many cases, the surgical hierarchy has an impact on more than one DRG. The methodology for determining the most resource-intensive surgical class, therefore, involves weighting each DRG for frequency to determine the average resources for each surgical class. For example, assume surgical class A includes DRGs 1 and 2 and surgical class B includes DRGs 3, 4, and 5, and that the weighting factor for DRG 1 is higher than that for DRG 3, but the weights for DRGs 4 and 5 are higher than the weight for DRG 2. To determine whether surgical class A should be higher or lower than surgical class B in the surgical hierarchy, we would weight the weighting factor of each DRG by frequency to determine average resource consumption for the surgical class and order the surgical classes from that with the highest to that with the lowest average resource utilization, with the exception of "other OR procedures" as discussed below.

This methodology may occasionally result in a case involving multiple procedures being assigned to the lower-weighted DRG of the available alternatives. However, given that the logic underlying the surgical hierarchy provides that the GROUPER searches for procedures that sometimes occur in cases involving multiple procedures, this result is unavoidable.

We would like to point out, notwithstanding the foregoing discussion, that there are a few instances where a surgical class with a smaller average relative weight is ordered above a surgical class with a higher average relative weight. For example, the "other OR procedures" group is uniformly ordered last in the surgical hierarchy of each MDC in which it occurs regardless of the fact that the weighting factor for the DRG or DRGs in that surgical class may be higher than that for other surgical classes in the MDC. The "other OR procedures" group is a class that is least likely to be related to the diagnoses in the MDC but are occasionally performed on patients with those diagnoses. Therefore, these procedures should only be considered if no other procedure more closely related to the diagnoses in the MDC has been performed.

A second example occurs when the difference between the two average weights for two surgical classes is very small. We have found that small differences generally do not warrant reordering the hierarchy since, by virtue of the hierarchy change, the weighting factors are likely to shift such that the higher-ordered surgical class has a lower average weight than the class ordered below it.

Based on the preliminary recalibration of the DRGs, we proposed to modify the surgical hierarchy as set forth below. As discussed below in section III.C of this preamble, the final recalibrated weights are somewhat different from those proposed since they are based on more complete data. Consequently, as described below, we have further revised the hierarchy in this final rule using the above principles.

a. In MDC 2, we proposed to reorder Extraocular Procedures Except Orbit (DRGs 40 and 41) above Lens Procedures with or without Vitrectomy (DRG 39).

b. In MDC 3, we proposed to reorder Cleft Lip and Palate Repair (DRG 52) below both Myringotomy with Tube Insertion (DRGs 61 and 62) and Mouth Procedures (DRGs 168 and 169).

c. In MDC 9, we proposed to reorder Skin, Subcutaneous Tissue and Breast Plastic Procedures (DRG 268) above Perianal and Pilonidal Procedures (DRG 267).

d. In MDC 13, we proposed to reorder Female Reproductive System Reconstructive Procedures (DRG 356) below both Vagina, Cervix and Vulva Procedures (DRG 360) and Laparoscopy and Incisional Tubal Interruption (DRG 361).

We received two comments on the proposed surgical hierarchy changes concerning MDCs 3 and 13.

Comment: One commenter pointed out that, although it may be indicated for the Medicare population, the proposed recordering of the MDC 3 surgical hierarchy to place Myringotomy with Tube Insertion (DRGs 61 and 62) above Cleft Lip and Palate Repair (DRG 52) is not indicated for the pediatric population. The commenter requested that HCFA not implement the proposed change, especially if the difference in resource use for the Medicare population is only rather slight.

Response: We will not be implementing the proposed change in the MDC 3 surgical hierarchy. When we tested the proposed change with the revised GROUPER and updated MEDPAR data, a number of cases moved frm Cleft Lip and Palate Repair (DRG 52) to Mouth Procedures (DRGs 168 and 169) and, although Cleft Lip and Palate Repair continued to have lower average charges, the difference between the three surgical classes was insignificant. Considering the commenter's request and the small differences in average charges, we have decided not to change their order in the surgical hierarchy. As noted above, we have generally found that small differences in average charges for surgical cases generally do not warrant reordering the hierarchy. However, based on the final recalibrated weights, there will be one change to the MDC 3 surgical hierarchy that was not proposed; Rhinoplasty (DRG 56) will be reordered above Miscellaneous Ear, Nose, Mouth and Throat Procedures (DRG 55). This change, therefore, will be the only change in the MDC 3 surgical hierarchy for FY 1991.

Comment: One commenter objected to the proposed change in the MDC 13 (Diseases and Disorders of the Female Reproductive System) surgical hierarchy that would move Female Reproductive System Reconstructive Procedures (DRG 356) below Vagina, Cervix and Vulva Procedures (DRG 360) and Laparoscopy and Incisional Tube Interruption (DRG 361). The commenter pointed out that, in his State, non-Medicare cases assigned to DRG 356 have a mean inlier length of stay of 5.3 days for all payers in 1989 compared to DRG 360 with 1.9 days and DRG 361 with 2.0 days. He also pointed out that the case volume for DRG 356 is greater than either DRGs 360 or 361 for all payers and that Medicare does not cover half of the procedures in DRG 361. The commenter stated that this proposed change appears to violate the criteria for establishing surgical hierarchies of MDCs indicated in the methodology set forth in the proposed rule.

Response: The surgical hierarchies are based on Medicare bill data and tailored for the Medicare population. The FY 1989 MEDPAR cases show that the average length of stay was 5.4 days for DRG 360, 5.1 days for DRG 361, and 4.9

days for cases in DRG 356. Although Medicare does not cover most of the procedures in DRG 361, the data indicate that the Medicare patients that are assigned to DRG 361 require comparatively more resources and have a longer length of stay than the non-Medicare patients assigned to DRG 361. The surgical hierarchy for MDC 13 was determined using the methodology described in the May 9, 1990 proposed rule and above in this final rule. The final DRG recalibration showed that DRG 356, with an average standardized charge of $4,129, continues to be less resource intensive than both DRG 360 ($4,421) and DRG 361 ($4,700) and will, therefore, be placed below them in the surgical hierarchy. We note that, based on the complete FY 1989 MEDPAR file, DRG 361 is now ordered above DRG 360. The final MDC 13 surgical hierarchy will reorder Laparoscopy and Incisional Tube Interruption (DRG 361) above Vagina, Cervix and Vulva Procedures (DRG 360), which will be reordered above Female Reproductive System Reconstructive Procedures (DRG 356). The revised surgical hierarchy for MDC 13 is as follows:

Pelvic Evisceration, Radical Hysterectomy and Radical Vulvectomy (DRG 353)
Uterine, Adnexa Procedures (DRGs 354, 355, 357, 358 and 359)
Laparoscopy and Incisional Tubal Interruption (DRG 361)
Vagina, Cervix and Vulva Procedures (DRG 360)
Female Reproductive System Reconstructive Procedures (DRG 356)
D&C, Conization & Radio-Implant (DRGs 363 and 364)
Endoscopic Tubal Interruption (DRG 362)
Other Female Reproductive System O.R. Procedures (DRG 365)

In addition ot the revisions noted above, a more complete MEDPAR file and our ability to test the proposed surgical hierarchy changes have indicated that we need to make a change in the surgical hierarchy for MDC 8. In MDC 8, we will reorder Local Excision and Removal of Internal Fixation Devices Except Hip and Femur (DRG 231) above Soft Tissue Procedures (DRGs 226 and 227) and Local Excision and Removal of Internal Fixation Devices of Hip and Femur (DRG 230).

We will implement in final the proposed changes to the MDC 2 and MDC 9 surgical hierarchy since we received no comments on these charges and the final recalibrated weights continue to support them. The final MDC 5 surgical hierarchy is set forth above in section III.B.3 of this preamble.

In addition ot the surgical hierarchy changes, we also received the following comment regarding our proposed ordering of liver, bone marrow, and tracheostomy cases.

Comment: One commenter was concerned about the hierarchy of the new DRGs for liver transplants, bone marrow transplants, and tracheostomy cases, comparing this hierarchy to the surgical hierarchy, which orders procedures from the most to least resource intensive. However, the commenter noted that the order set forth in the proposed rule did not follow the order as assigned by the weight for each of the proposed DRGs. Correct ordering could be important to patients having bone or liver transplants who also require a tracheostomy. The commenter suggests that a patient needing both a liver transplant and tracheostomy should group to DRG 480 because liver transplants are relatively more costly than tracheostomies, and thus, have a higher weight. However, a patient requiring a bone marrow transplant and a tracheostomy should be assigned to DRG 483, because tracheostomies are relatively more costly than bone marrow transplants as indicated by the higher weight for DRG 483. The commenter recommends revising the hierarchy as follows:

DRG 480 Liver Transplant
DRG 483 Tracheostomy Except for Mouth, Larynx or Pharynx Disorder
DRG 481 Bone Marrow Transplant
DRG 482 Tracheostomy with Mouth, Larynx or Pharynx Disorder

Response: We agree with the commenter and have revised the order of these DRGs. That is, cases involving multiple procedures in DRGs 480 through 483 will be assigned to the highest-weighted appropriate DRG. This ensures that the most costly procedure performed is the determining factor in DRG classification.

The final weights for the new DRGs are as follows:

DRG	Weight
DRG 480	15.2645
DRG 481	12.4485
DRG 482	3.2660
DRG 483	14.0597

Cases will be assigned in order of highest-weighted DRG to lowest, that is, DRG 480, 483, 481, and 482. Therefore, a patient having both liver transplant and tracheostomy procedures performed in the stay will be assigned to DRG 480, Liver Transplant. Patients having both bone marrow transplant and tracheostomy procedures for other than mouth, larynx, or pharynx disorders will be assigned to DRG 483, since the tracheostomy procedure is more resource intensive than the bone marrow transplant.

We will be evaluating the performance of these DRGs over the next 2 years, as data become available. With the annual recalibration, the weights assigned to these DRGs are subject to change and the hierarchy will be reviewed each year and revised if the resource requirements increase or decrease for any one of these DRGs relative to the other DRGs.

7. Refinement of Complications and Comorbidities List

There is a standard list of diagnoses that are considered complications and comorbidities (CCs). This list was developed by physician panels to include those diagnoses that, when present as a secondary condition, would be considered a substantial complication or comorbidity. A substantial CC, in turn, is defined as a condition that, because of its presence with a specific principal diagnosis, would cause an increase in length of stay by at least one day for at least 75 percent of the patients.

Based upon clinical review by our medical consultants and analysis of the FY 1989 MEDPAR data, we proposed to revise the list of diagnoses that are considered to be CCs as follows:

• We proposed to add the following diagnoses to the CC list:

112.0—Candidiasis of mouth Thrush
357.0—Acute infective polyneuritis Guillain-Barre syndrome

Each of these diagnosis codes will be considered a CC for any principal diagnosis not shown in Table 6e, Additions to the CC Exclusion List (see below).

• We proposed to delete the following diagnoses from the CC list:

349.0—Reaction to spinal or lumbar puncture
575.6—Cholesterolosis of gallbladder
575.8—Other specified disorders of gallbladder
682.4—Other cellulitis and abscess of hand, except fingers and thumb

Each of these diagnoses will no longer be considered a CC for any principal diagnosis.

We proposed a limited revision of the CC Exclusions List, which includes corrections of errors in the existing list, addition of a number of excluded CCs, and the deletion of a number of excluded CCs. These proposed changes are being made in accordance with the principles established when we created the CC Exclusions List in 1987.

Tables 6e and 6f in section IV of the addendum to the proposed rule contained the proposed revisions to the

CC Exclusions List that would be effective for discharges occurring on or after October 1, 1990. Each table shows the principal diagnosis with proposed changes to the excluded CCs. Each of these principal diagnoses is shown with an asterisk and the additions or deletions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis.

CCs that are added to the list are in Table 6e—Additions to the CC Exclusions List. (The indented diagnoses were recognized by the GROUPER as valid CCs for the asterisked principal diagnosis but will be excluded and thus ignored by the GROUPER beginning with discharges on or after October 1, 1990.)

CCs that are deleted from the list are in Table 6f—Deletions from the CC Exclusions List. (Except for those diagnoses that are to be excluded from the CC list as described above (that is, 349.0, 575.6, 575.8, and 682.4), the indented diagnoses will be recognized as valid CCs beginning with discharges on or after October 1, 1990.)

Copies of the original CC Exclusions List applicable to FY 1988 may be obtained from the National Technical Information Service (NTIS) of the Department of Commerce. It is available in hard copy for $64.95 and on microfiche for $18.50. These prices include $3.00 for shipping and handling. A request for the FY 1988 CC Exclusions List (which should include the identification accession number, ((PB) 88-133970), should be made to the following address: National Technical Information Service, United States Department of Commerce, Springfield, Virginia 22161, or by calling (703) 487-4650.

Users should be aware of the fact that both of the previous revisions to the Exclusion List (Table 6d and 6e of the September 30, 1988 final rule and Tables 6f and 6g of the September 1, 1989 final rule) and those in Tables 6e and 6f of this document must be incorporated into the list purchased from NTIS in order to obtain the CC Exclusions List applicable for discharges occurring on or after October 1, 1990. (We do not intend to update the listing available from NTIS to reflect these or any future revisions.)

Alternatively, the complete documentation of the GROUPER logic, including the current CC Exclusions List, is available from 3M/HIS. 3M/HIS, under contract with HCFA, is responsible for updating and maintaining the GROUPER program. The current DRG Definitions Manual, Seventh Revision is available for $195.00, which includes $15.00 for shipping and handling. The Seventh Revision of this manual, which includes the changes in this document, may be obtained by writing to the following address: 3M/HIS, 100 Barnes Road, Wallingford, Connecticut 06492, or by calling (203) 949-0303.

Comment: We received several comments regarding our proposed deletions from the CC list. While two of the commenters supported our proposal, one commenter objected to the deletion of these diagnoses as CCs, most specifically to the deletion of other cellutitis and abscess of hand, except fingers and thumb (diagnosis code 682.4). In the commenter's experience, all of these diagnoses require additional treatment, testing, and observation and meet the requirements of the HCFA definition for CCs (that is, a secondary condition, which when present with a specific principal diagnosis, increases the length of stay by at least one day in at least 75 percent of the cases). According to this commenter, cellulitis and abscess of the hand often require surgical debridement or antibiotics, or both. Since other anatomical locations with cellulitis continue to be CCs, this commenter believes that the hand should also remain a CC.

Another comment was received protesting the elimination of reaction to spinal or lumbar puncture (diagnosis code 349.0) as a CC. This commenter is convinced that the presence of this condition almost always requires additional days of stay and resource consumption.

Response: We extensively analyzed each of the diagnoses that were proposed for deletion from the CC list. For each DRG pair where one of these diagnoses is frequently reported as a secondary diagnosis, we compared the average charges per case for cases with that diagnosis reported as the only CC to the charges per case for cases with no CCs and for cases with other CCs besides the one proposed for deletion. The charges for the specific diagnoses that we proposed to delete were consistently lower than the charges for cases within the same DRG with other CC conditions. Comparing DRG charges with and without CCs to the charges for these diagnoses indicated that the charges were more similar to the cases without CCs than the charges of the cases with other CCs. This analysis and result held true for diagnosis code 682.4 (Other cellulitis and abscess of hand, except fingers and thumb). In fact, our analysis of cases in DRGs 444 and 445 (Multiple Trauma) and DRGs 277 and 278 (Cellulitis) shows that cases assigned to DRGs 444 and 277 in which 682.4 is the only CC have only slightly higher average charges than cases with no CCs assigned to DRG 445 and lower average charges than cases with no CC assigned to DRG 278.

With respect to diagnosis code 349.0, a similar analysis indicates that cases with this diagnosis as the only CC had almost identical average charges as cases in the same DRG pair with no CCs.

In addition to our data analysis, HCFA medical consultants reviewed the diagnoses for clinical significance as a comorbid or complicating condition. Based on our analysis and medical review, we are making no changes in the proposed list of diagnoses to be deleted from the CC list.

Comment: Several commenters sent extensive lists of diagnoses for consideration as CCs; others sent lists of conditions to be considered for exclusion as CCs when occurring with certain diagnoses.

Response: We appreciate these commenters calling our attention to additional diagnoses that might have an impact on length of stay or charges. HCFA analyzes and evaluates diagnoses on an on-going basis to maintain and continuously refine the CC list and the additions and exclusions to that list. Those codes submitted during this comment period will be considered as part of our analysis in the coming year. Many of the suggested additions were reviewed this year and were found to have few or no Medicare cases upon which to base an analysis or to have no impact on charges. One of the suggested diagnoses, 357.0 (Acute infective polyneuritis (Guillain-Barre Syndrome)) was included in the proposed rule for addition to the CC list and will be considered a CC for discharges on or after October 1, 1990.

8. Review of Procedure Codes in DRGs 468 and 477

Each year, we review cases assigned to DRG 468 (Extensive OR Procedure Unrelated to Principal Diagnosis) in order to determine whether, in conjunction with certain principal diagnoses, there were certain procedures performed that are not currently included in the surgical hierarchy for the MDC in which the diagnosis falls. In FY 1989, this review resulted in the addition of DRG 476 (Prostatic OR Procedure Unrelated to Principal Diagnosis) and DRG 477 (Non-Extensive OR Procedure Unrelated to Principal Diagnosis). For a detailed discussion of these changes, see the September 30, 1988 final rule (53 FR 38487).

Since DRG 468 is reserved for those cases in which none of the OR procedures is related to the principal diagnosis, it is intended to capture atypical cases, that is, those cases not occurring with sufficient frequency to represent a distinct recognizable clinical group. DRGs 476 and 477 are assigned to specific subsets of these cases. DRG 476 is currently assigned to those discharges in which one of the following prostatic procedures is performed and it is unrelated to the principal diagnosis:

60.2—Transurethral prostatectomy
60.61—Local excision of lesion of prostate
60.69—Other prostatectomy NEC
60.94—Control of postoperative hemorrhage of prostate

DRG 477 is assigned to those discharges in which the only procedure performed is a nonextensive procedure that is unrelated to the principal diagnosis.

In Table 6c in section IV of the addendum to the September 30, 1988 final rule, we listed the ICD-9-CM procedure codes for all of the procedures we consider nonextensive procedures if performed with an unrelated principal diagnosis. These cases are grouped in DRG 477.

We annually conduct a review of procedures producing DRG 468 or 477 assignments on the basis of volume of cases in these DRGs with each procedure. Our medical consultants then identify those procedures occurring in conjunction with certain diagnoses with sufficient frequency to justify adding them to one of the surgical DRGs for the MDC in which the diagnosis falls. On the basis of this review, we did not identify any changes that are necessary; therefore, we did not propose to move any procedures from DRGs 468 and 477 to one of the surgical DRGs.

We did, however, identify some additional procedure codes that should be added to DRG 476. These codes represent prostatic OR procedures that are clinically similar to the four procedures that currently group to DRG 476 when they are performed on patients admitted for unrelated medical reasons. Therefore, we proposed to assign to DRG 476 those discharges in which one of the following prostatic procedures is the only OR procedure performed and it is unrelated to the principal diagnosis:

60.0—Incision of prostate
60.12—Open biopsy of prostate
60.15—Biopsy of periprostatic tissue
60.18—Other diagnostic procedures on prostatic and periprostatic tissue
60.93—Repair of prostate
60.99—Other operations on prostate NEC

We also reviewed the list of OR procedures that produce DRG 468 assignments to ascertain if any of those procedures should be moved to the list of nonextensive procedures that produce DRG 477 assignments. Our medical consultants first identified the procedures they believed were clinically similar to those nonextensive procedures already assigned to DRG 477. We then analyzed the charge and length of stay data for these procedures to ensure that the discharges associated with the procedures are more similar to the discharges that currently group to DRG 477 than to the discharges that group to DRG 468.

Except for one series of procedures (that is, eye procedures), we proposed to add to the list of nonextensive procedures only those procedures for which we had an adequate number of discharges to analyze for statistical homogeneity. However, we proposed to add to DRG 477 all the OR procedures involving the eye (procedure codes 08.0 through 16.99) that currently group to DRG 468 when performed in association with an unrelated principal diagnosis. The charge and length of stay data we analyzed for discharges in DRG 468 include some of these eye procedures and the data show that those discharges are not as resource intensive as other discharges in DRG 468 and are, in fact, more similar to discharges in DRG 477. Therefore, we believe that moving all of the eye OR procedures to the list of nonextensive OR procedures would result in the groupings of discharges that are more homogenous in terms of resource use.

In Table 6g in section IV of the addendum to this final rule, we have listed the additional procedure codes that we consider nonextensive procedures if performed with an unrelated principal diagnosis. These cases will group to DRG 477 instead of DRG 468 beginning with discharges on or after October 1, 1990.

We received no comments on the changes to DRG 468, 476, and 477 and we will incorporate these changes into the final GROUPER as proposed.

9. Changes to the ICD-9-CM Coding System

As discussed above in section III.B.1 of this preamble, ICD-9-CM is a coding system for the reporting of diagnostic information and procedures performed on a patient. In September 1985, the ICD-9-CM Coordination and Maintenance Committee was formed. This is a Federal interdepartmental committee charged with the mission of maintaining and updating the ICD-9-CM. This including approving new coding changes, developing errata, addenda, and other modifications to the ICD-9-CM to reflect newly developed procedures and technologies and newly identified diseases. The Committee is also responsible for promoting the use of Federal and non-Federal educational programs and other communication techniques with a view toward standardizing coding applications and upgrading the quality of the classification system.

The Committee is co-chaired by the National Center for Health Statistics (NCHS) and HCFA. The NCHS has lead responsibility for the ICD-9-CM diagnoses codes included in Volumes 1 and 2—Diseases: Tabular List and Diseases: Alphabetic Index, while HFCA has lead responsibility for the ICD-9-CM procedure codes included in Volume 3—Procedures: Tabular List and Alphabetic Index.

The Committee encourages participation in the above process by major health-related organizations. In this regard, the Committee holds public meetings for discussion of educational issues and proposed coding changes. These meetings provide an opportunity for input into coding matters from representatives of recognized organizations in the coding fields, such as the American Medical Record Association and the American Hospital Association, as well as physicians, medical record administrators, and other members of the public. Considering the opinions expressed at the public meetings, the Committee formulates recommendations, which then must be approved by the agencies.

The Committee presented proposals for coding changes at public meetings held on April 14, 1989, August 10, 1989, and December 4, 1989 and finalized the coding changes after consideration of comments received at the meetings and in writing in the 30 days following the December 4, 1989 meeting. The initial meeting for consideration of coding issues for resolution in FY 1991 was held on April 23, 1990 and a second meeting was held on July 26, 1990. Copies of the minutes of these meetings may be obtained by writing to the co-chairpersons representing NCHS and HCFA. We encourage commenters to address suggestions on coding issues involving diagnosis codes to: Ms. Sue Meads, R.R.A, Co-Chairperson, ICD-9-CM Coordination and Maintenance Committee, NCHS, room 9-58, 6525 Belcrest Road, Hyattsville, Maryland 20782.

Questions and comments concerning the procedure codes should be addressed to: Ms. Patricia E. Brooks, Co-

Chairperson, ICD-9-CM Coordination and Maintenance Committee, HCFA Office of Coverage Policy, Room 401 East High Rise Building, 6325 Security Boulevard, Baltimore, Maryland 21207.

The additional new ICD-9-CM codes that have been approved will become effective October 1, 1990. The new ICD-9-CM codes are listed, along with their DRG classifications, in Tables 6a and 6b in section 14 of the addendum to this rule.

Further, the Committee has recommended the expansion of the ICD-9-CM diagnosis codes shown on Table 6c to categories requiring a fifth digit for valid diagnosis code assignment. Thus, these diagnosis codes will not be recognized by GROUPER beginning with discharges occurring on or after October 1, 1990. The corresponding five-digit codes are shown in Table 6a. Finally, the Committee recommended the expansion of the ICD-9-CM procedure code category 58.3 (Excision or destruction of urethral tissue or lesion). The Committee recommended that the title of category 58.3 be revised to read "Excision or destruction of lesion or tissue of urethra", and that the inclusion and exclusion notes be amended to reflect the new procedure codes 58.31 (Endoscopic excision or destruction of lesion or tissue of urethra) and 58.39 (Other local excision or destruction of lesion or tissue of urethra). The titles and DRG assignment of these procedure codes are included in Table 6b of section IV of the addendum to this final rule.

Although we did not include in the proposed rule a description of the revised procedure and diagnosis code titles that will be effective October 1, 1990 because there was no effect on DRG assignment, we have included the revised titles in Table 6l and Table 6m in the addendum to this final rule as a convenience to the reader.

10. Other Issues

a. *Cochlear Implants.* In the September 1, 1989 final rule (54 FR 36463), in response to comments received on the May 8, 1989 proposed rule, we reevaluated the placement of cochlear implant discharges in DRG 49 (Major Head and Neck Procedures) based upon billing data from FY 1988. At that time, we found that the FY 1988 MEDPAR data indicated that it was not appropriate to establish a separate DRG for cochlear implants. As indicated in that final rule, the 113 cases coded as cochlear implants constituted only 2 percent of the total discharges in DRG 49. Moreover, if we had removed the cochlear implant cases from DRG 49 and established a separate DRG based on the FY 1989 MEDPAR data, the relative weight for cochlear implants would have been lower than the weight for DRG 49.

Comment: Many commenters wrote again this year to express concern that the classification of cochlear implant cases to DRG 49 is inappropriate in terms of both clinical coherency and resource intensity and could limit the availability of cochlear implants to Medicare beneficiaries. A number of members of three advocacy groups for the hearing impaired individuals wrote to express their support for a change in the assignment of the cochlear implant to a higher-weighted DRG. A number of these commenters suggested that the low average charges in the MEDPAR data reflect the less expensive single-channel device that is no longer manufactured and, as a result, understate the cost of the multi-channel device. Finally, the distributor of the multi-channel cochlear device intends to analyze the FY 1989 MEDPAR file to determine if the cases coded as cochlear implants in these data do not reflect the cost of the cochlear implant device, as they alleged for the FY 1988 data. The commenter believes that procedure code 20.96 (Implantation or replacement of cochlear prosthetic device, NOS) has been misused and should be eliminated.

Response: We have reexamined the most recent FY 1989 MEDPAR file and continue to believe that it would not be appropriate to establish a separate DRG for cochlear implant procedures at this time. The 107 cases coded as cochlear implants constitute only 2.8 percent of the total discharges in DRG 49. Due to reassignment of cases from DRG 49 to a number of the new DRGs, the number of cases in this DRG dropped from 7,370 cases in the FY 1988 data base to 3,778 in the FY 1989 data base. (See Tables 7A and 7B in the addendum to this final rule for a comparison of the FY 1989 data assigned by both the FY 1990 and FY 1991 GROUPERs.)

We again examined the effect the removal of procedure code 20.96 (Implantation or replacement of cochlear prosthetic device, NOS) and 20.97 (Implantation or replacement of cochlear prosthetic device, single channel) would have on the average charges for DRG 49 cases and for cochlear implant cases. We determined that the removal of either or both of these two procedure codes would have no significant impact on the weighting factor for DRG 49. The average charge for the 54 cases coded with procedure code 20.98 (Implantation or replacement of cochlear prosthetic device, multiple channel) alone is only slightly higher than the average charge for other DRG 49 cases.

With regard to the commenter's concern that the average charges may be understated because cases coded as cochlear implants do not reflect the cost of the cochlear implant device (that is, $13,900.00), we found that, in total, only 59 percent of the cases had standardized charges that exceeded this amount.

We can only assume that what a hospital submits as its charges on each bill are in fact the actual total charges for the case. A hospital is under no obligation to show charges equal to or greater than its costs for the services.

However, we recognize that some hospitals may be experiencing problems with the coding of cochlear implant cases. Since the FY 1990 final rule was published, we have taken the following actions to clarify the use of the ICD-9-CM procedure codes for the implantation of the cochlear device:

- HCFA staff wrote an educational article entitled "Procedure Code Assignments for Hearing Devices" for the American Hospital Association's (AHA's) Coding Clinic for ICD-9-CM. This article appeared in the fourth quarter 1988 issue (pages 5-9) and clarifies the proper procedure coding for cochlear implants. Coding Clinic for ICD-9-CM has a wide audience among hospital coders and is also distributed to the Peer Review Organizations (PROs) to alert them of the need for special attention in the DRG validation review.
- HCFA's Medical Coding Policy Staff has reviewed the index and tabular entries for these procedures in Volume 3 of the ICD-9-CM. They have identified a number of entries that need clarification. These clarifications will become effective for discharges occurring on or after October 1, 1990.

Comment: A number of cochlear implant recipients wrote to describe the improvement in their quality of life, as a result of the technology. Two Medicare beneficiaries supplied copies of "requests for predetermination of coverage" that their surgeons had sent to Medicare contractors. The submittals supported an upgrade of their current implants either to multi-channel devices or to a higher quality speech processor. These requests had not been answered. All of these recipients believe that Medicare's low payment would prevent hospitals from continuing to provide the surgery. These comments included claims that some 27 hospitals will no longer perform cochlear implants for Medicare beneficiaries because of the low payment.

Response: We agree that cochlear implants should be available to those Medicare beneficiaries who meet the Medicare coverage guidelines for the

surgery. Medicare coverage is provided only for those patients who meet all of the following selection guidelines:

• Diagnosis of total sensorineural deafness that cannot be mitigated by use of hearing aid in patients whose auditory cranial nerves are stimulable.

• Cognitive ability to use auditory clues and a willingness to undergo an extended program of rehabilitation.

• Post-lingual deafness.

• Adulthood (at least 18 years of age).

• Freedom from middle ear infection, an accessible cochlear lumen that is structurally suited to implantation, and freedom from lesions in the auditory nerve and acoustic areas of the central nervous system.

• No contraindications to surgery.

Our central data base on preprocedural reviews conducted by the Peer Review Organizations (PROs) does not list the cochlear implant for any PRO's selections for review. Therefore, we are not aware of any PRO that is requiring preprocedural review for cochlear implants. Other than PRO preprocedural review, there is no predetermination of coverage under Medicare as with some private insurers, although hospital staff or the surgeon may clarify the coverage requirements with the fiscal intermediary or PRO. If a beneficiary meets the requirements listed in the coverage guidelines (HCFA Pub. 6, Medicare Coverage Issues Manual, § 65–14), the expenses for the implant device, speech processor, and follow-up training and rehabilitation will be covered.

In the event that any beneficiary or advocacy group is aware of specific cases where a hospital refused to provide this covered service to a beneficiary who meets these coverage guidelines, they should provide this information to us for review.

b. *Penile Prostheses—Comment:* One commenter submitted an analysis prepared by a health policy consulting firm that recommends alternative DRG assignments for penile prosthesis implants that would provide a higher payment amount. In preparing the analysis, the consultants searched the FY 1988 MEDPAR file for all cases that met one or both of the following critiera:

• The record included one or more of the following procedure codes:

—64.95 (Insertion or replacement of non-inflatable penile prosthesis).

—64.96 (Removal of internal prosthesis of penis).

—64.97 (Insertion or replacement of inflatable penile prosthesis).

• The case was assigned to DRG 341 (Penis Procedures).

The records for all DRG 341 cases were then linked with summary data on the discharging hospitals obtained from the Medicare Provider-Specific and Provider-of-Services Files and information from previously published prospective payment system final rules. The consulting firm standardized the charges of these cases and simulated DRG weights to analyze alternative DRG assignments.

The study identified 5,967 prosthesis cases with an average standardized charge of $6,500, which is 41 percent higher than the standardized charges for the 9,991 nonprosthesis cases in DRG 341. The consultants concluded from this comparison that cases involving penile prosthesis implantation currently assigned to DRG 341 appear to be underpaid. Based on the results of this study, the commenter advocated one of the following changes:

• Reassignment of all penile implant cases to a new, unique DRG.

• Reassignment of all penile implant cases to DRG 335 (Major Male Pelvic Procedures without CC).

• Reassignment of all nonimplant cases from DRG 341 to DRG 345 (Other Male Reproductive System OR Procedures Except for Malignancy), thus leaving penile prosthesis implant cases in their own, unique DRG.

Several other commenters wrote to protest the payment amount received for the implantation of inflatable and noninflatable penile prostheses under DRG 341. The commenters state that their hospitals lose thousands of dollars on every inflatable prosthesis case performed. The commenters believe that the amount of DRG payment limits the availability of the prostheses and encourages use of only the lower cost device (that is, the noninflatable prosthesis). They also believe that it creates an incentive to perform the implant on an outpatient basis, where the cost of the device will not be subject to DRG limitations. At a minimum, the commenters contend that the patients will suffer an increased risk of infection and complications in the outpatient setting.

All of the commenters are concerned that Medicare patients may be denied access to the more advanced technology of the inflatable prosthesis. It is their opinion that the inflatable device is the preferred replacement for normal physiologic function. However, the commenters contend that payment under DRG 341 is too low to allow hospitals to offer the more expensive prosthesis.

Response: We believe that the suggested classification changes disregard the basic concept of the DRG classification system in an attempt to receive a more favorable payment rate for this class of cases. In matching a DRG assignment with the simulated relative weights, the commenter asks us to move the penile prosthesis implant cases into DRG 335, where they would be classified based upon having a major male pelvic procedure without CC performed. Alternatively, the cases other than penis implant procedures that are currently assigned to DRG 341 would be classified in the "other" procedures category, outside the surgical hierarchy for MDC 12. As explained in our discussion on surgical hierarchy (section III.B.6 of this preamble), the "other" surgical category contains those procedures that have been determined to be the procedures least likely to be related to the diagnoses in MDC 12 but are occasionally performed on patients with these diagnoses. The procedures that the commenter seeks to have reclassified have already been determined to be commonly performed on patients in MDC 12.

In evaluating proposals for reclassification of DRGs, we consider the impact of the proposal upon other inpatient hospital cases and the consistency of the proposal within the basic classification framework. We acknowledge that penile prosthesis cases, on average, are more resource intensive than several other penis procedures. However, in every surgical DRG, there are some procedures that are more resource intensive than the average of all others in the group. This fact is inevitable in a classification system based on groups of diagnoses or procedures. Consequently, the fact that a given procedure is more resource intensive than average, in and of itself, is not sufficient reason to make classification changes. Rather, in considering classification proposals, we must assess the aggregate payment scheme and its impact upon hospitals and beneficiary access.

In addition, we must consider the impact of the proposed reclassification upon other procedures currently classified in DRG 341. Removal of penile prosthesis cases from the DRG would result in decreased payment for the remaining procedures. However, there are several very resource-intensive procedures currently assigned to this DRG, such as construction and reconstruction of the penis. The proposed reclassification would likely result in severe underpayments for those procedures.

The FY 1989 MEDPAR data on penile prosthesis implants show that the

average standardized charges for the 5,738 implants in DRG 341 are 31.36 percent higher than those of the nonimplant cases. We note that the commenter did not consider penile prosthesis implant procedures classified outside DRG 341. To evaluate the overall impact of our payment for penile prosthesis implant and thus, beneficiaries' access to care, we analyzed the charges for other DRGS where these codes are also classified.

Effective with discharges occurring on or after October 1, 1987, we added the penile prosthesis codes to DRG 315 (Other Kidney and Urinary Tract OR Procedures) to eliminate the illogical assignment of a number of cases to DRG 468 (then titled Unrelated OR Procedures). These surgical procedures were related to the principal diagnoses shown for the cases, Mechanical complication of genitourinary device, implant and graft (diagnosis codes 996.30 and 996.39). In the FY 1989 MEDPAR, there are 950 penile implant cases in DRG 315, with average standardized charges of $6,575.52. This is only 45.16 percent of the charges for nonimplant cases in DRG 315 ($14,570.59) Thus, those penile implant cases assigned to DRG 315 receive payment in excess of charges.

In reviewing the FY 1989 MEDPAR, we also found 874 penile prosthesis implant cases in DRG 477 (Non-Extensive OR Procedure Unrelated to Principal Diagnosis). We do not generally consider DRG 477 cases when analyzing the classification of procedure codes in the MDC logic, since we have defined them as being atypical cases. In view of the emphasis that the hospital industry is placing on the DRG payment to standardized charge ratio for these implants, we believe it is relevant in this discussion. The 874 implant cases had an average standardized charge of $7,542.92, which is 84.33 percent of the charge for nonimplant cases in DRG 477, $8,944.37. Thus, these implant cases also receive payment in excess of charges.

We do not believe it is appropriate to establish single procedure DRGs under most circumstances. The basic concept of the DRG system is to group a number of clinically similar diagnoses and procedures that are similar in resource use. The establishment of single-procedure DRGs runs counter to the grouping concept and would establish a precedent to classify and develop weighting factors separately for all individual procedures and diagnoses. Under such a precedent, the number of DRGs cold grow dramatically, rapidly resulting in an unmanageable system. In addition, establishing DRGs along these lines would represent a major step away from the prospective payment system as currently established, and a major step back toward a cost-based payment system, in which payment to a hospital is closely tied to the actual costs incurred in furnishing individual services.

Procedure-specific DRGs should be utilized only in those situations in which the data indicate that the procedure is neither clinically coherent nor homogeneous with respect to resource use with any other procedures in the major diagnostic category. Our analysis of the data on penile prostheses does not indicate that this is the situation.

Comment: One of the commenters noted that even when the beneficiary has supplemental health insurance, Medicare rules prohibit the hospital billing an extra amount for the higher-cost inflatable prosthesis.

Response: The prospective payment amount is the Medicare payment for all services provided to a Medicare beneficiary during a covered inpatient stay. Under § 412.42(a), a hospital may not charge beneficiaries, or any other person on their behalf, for medically necessary services for which payment is made by Medicare, even if the hospital's costs of furnishing services to that beneficiary are greater than the amount the hospital is paid under the prospective payment system. The commenters on this issue have uniformly stated that the implantation of an internal penile prosthesis is a medically necessary service. Therefore, hospitals are not permitted to charge beneficiaries an additional amount for the more expensive device.

c. *DRG Assignment of the Fifth Digit Classification for Acute Myocardial Infarction (AMI)—Comment:* Two commenters supported the new diagnosis codes for acute myocardial infarction and the DRG reassignment for myocardial infarction subsequent episode of care cases to DRGs 132 and 133, which were effective October 1, 1989. However, both commenters expressed concern that the FY 1991 DRG weights for DRGs 121 and 122 (Circulatory Disorders with Acute Myocardial Infarction, Discharged Alive) would be too low for acute cases because they are based on all cases currently assigned to these DRGs. The commenters suggested that an adjustment be made in the weights for DRGs 121 and 122 to reflect the reassignment of less resource-intensive cases to DRG 132 and 133. If the weights are not adjusted, one of the commenters suggested leaving the less resource-intensive cases in DRGs 121 and 122 until the DRG reassignment could be reflected in recalibration.

In support of their request, a teaching hospital organization and health policy consulting firm submitted the results of the firm's study of 1,104 Medicare patients who suffered an AMI, either acute or recent (subsequent admissions), from 87 hospitals. These discharges occurred in October and November of 1989. They developed a hypothetical DRG weight for the sample cases (acute or recent) based on the patients' standardized charges and compared the payment that certain classes of hospitals would receive under the current weights for DRGs, 121 122, 123, 132, and 133 in FY 1990. About 12 percent of the AMIs in the study's 2-month sample were really recent MIs. They estimated that the underweighting of the AMI DRGs resulted in hospital losses for the acute MI cases of $97.4 million. They estimated that hospitals would lose an additional $38.5 million in underpayments for the recent MI cases that are now assigned to much lower-weighted DRGs based on the new principal diagnosis, subsequent admission within 8 weeks of an AMI.

The commenters contend that these estimates do not take into account other reasons why MI cases may be increasing in costliness relative to other hospital cases such as the recent increase in use of expensive thrombolytic agents, such as tissue plasminogen activator (TPA). They recommend that we use the partially complete FY 1990 MEDPAR file data to recalibrate the affected DRGs for FY 1991 prior to the recalibration for the rest of the DRGs based on 1990 data, effective with FY 1992.

Response: Effective with discharges on or after October 1, 1989, we required the use of a new fifth digit subclassification within the ICD-9-CM diagnosis category 410 (Acute myocardial infarction). This subclassification distinguishes an initial episode of care from a subsequent episode of care. A fifth digit of "1" (initial episode of care) is used to designate the acute phase of care regardless of the location of treatment. It includes cases that are transferred for care and treatment within the acute phase of care. Any subsequent episode of care for another myocardial infarction is also assigned a fifth digit of "1." All of these cases are assigned, as they have been in the past, to one of the myocardial infarction DRGs 121, 122, or 123 (or in the case with pacemaker implantation, DRG 115).

A fifth digit of "2" is used to designate observation, treatment, or evaluation of

myocardial infarction within 8 weeks of onset, but following the acute phase, or in the healing state in which the episode of care may be for related or unrelated conditions. All of these cases are assigned to one of the atherosclerosis DRGs (132 or 133) if acute myocardial infarction, subsequent episode of care is identified as the principal diagnosis. Our reasons for assigning these cases to the atherosclerosis DRG rather than to a myocardial infarction DRG relate to two of the basic characteristics of the DRG patient classification system. First, each DRG should contain cases with a similar pattern of resource intensity and, second, each DRG should contain cases that are similar from a clinical perspective. We note that cases that would require surgical procedures upon readmission or cases that are readmitted with a complication of myocardial infarction or cases that are readmitted with a complication of myocardial infarction would group to a different MDC 5 DRG.

Without the creation of a new fifth digit subclassification, we would have continued to be unable to distinguish the resource-intensive, clinically-coherent group of patients admitted to the hospital with an acute myocardial infarction from less resource-intensive and clinically-different groups of patients who are not suffering an acute myocardial infarction but who are readmitted to the hospital within 8 weeks of a previous myocardial infarction. Prior to October 1, 1989, according to ICD-9-CM coding convention, various cases of chronic ischemic heart disease (for example, coronary atherosclerosis) were classified as acute myocardial infarctions if they occur within 8 weeks of the date of a previous infarction. Thus, cases of acute myocardial infarction have been classified with cases that are not acute myocardial infarctions. This coding convention was developed and is appropriate for mortality reporting purposes but is inappropriate for morbidity reporting purposes. In addition to the problems this coding convention created for the DRG classification system, it also distorted the statistical data in the United States concerning the incidence of myocardial infarction.

We believe these problems will be solved by the use of the fifth digit subclassification. However, until the new diagnosis codes are reflected in our MEDPAR data (that is, FY 1990 data), we are unable to distinguish between the acute and nonacute cases for purposes of recalibration. Thus, as the commenters noted, relative weights for DRGs 121 and 122 are based on the resource requirements for both the high-cost acute myocardial infarction cases and the less resource-intensive nonacute cases that are paid under DRGs 132 and 133 beginning in FY 1990. The reassignment of the lower cost cases from DRG 121 and 122 will not be reflected in the DRG weights until FY 1992, when FY 1990 data will be used in recalibration.

We have not adopted either of the commenters' suggested alternatives because they are not consistent with our standard policy on reclassification and recalibration. When ICD-9-CM diagnosis codes that affect DRG assignment are added, revised, or deleted, we try to take these changes into account in recalibration. To the extent possible, we convert the existing codes into their equivalents under the revised code definitions so that cases including these codes will be classified in their new DRG assignments before recalibration. When we are unable to determine how cases will be coded under the revised definitions, our policy is to leave the cases in their current DRG assignment for recalibration purposes only. We still assign the codes to the appropriate DRG for payment purposes. Because we are unable to identify which cases in the FY 1989 MEDPAR will no longer be assigned to DRGs 121 and 122, we have left all acute myocardial infarction cases in DRGs 121 and 122 in recalibrating the weights. In addition, since we cannot identify which cases will no longer be assigned to DRGs 121 and 122, we cannot determine an appropriate adjustment to the DRG weights for DRG 121 and 122 to reflect the new DRG assignments.

We believe it would be inappropriate to continue assigning the nonacute cases to DRGs 121 and 122 for payment purposes until FY 1992 because it would result in excessive payments for the nonacute cases without improving the payment accuracy for the acute cases in DRGs 121 and 122.

We also believe it would be inappropriate to adjust the weights for DRG 121 and DRG 122 based on the limited billing data that are available for FY 1990. Although we sometimes use more recent data to confirm or revise a DRG assignment, we use only data from a single time period to recalibrate the DRG weights. This policy is necessary because using data from different time periods would distort the measurement of relative resource use.

We note that if our policy has had the effect of decreasing program expenditures for AMI cases, it has had the effect of increasing program expenditures in other situations involving coding revisions. The decision that we made in the September 1, 1989 prospective payment system final rule to add procedure code 37.26 (Cardiac electrophysiologic stimulation and recording studies (EP studies) as a nonoperating room procedure affecting assignment to DRGs 104, 108, and 112 (54 FR 36465) is an example of an FY 1990 change in which application of this policy may have increased program expenditures.

The distinct ICD-9-CM procedure code for EP studies became effective October 1, 1988. Previously, EP studies were identified temporarily under procedure code 37.29 (Other diagnostic procedures on the heart) along with His Bundle. Based on review of limited FY 1989 billing data and public comment, we changed the DRG assignment for EP studies. However, we continued to rely on FY 1988 billing data to recalibrate the DRG weights. We could not identify which of the cases under procedure code 37.29 in the FY 1988 data would be affected by the assignment of procedure code 37.26 to DRGs 104, 108, and 112. Therefore, we left all cases with Code 37.29 in the lower-weighted DRGs 138 and 139 in recalibrating the weights.

Finally, we note that effective with discharges occurring on or after October 1, 1990, sections 1886(d)(4)(C)(iii) of the Act requires that any reclassification or recalibration changes be made in a manner that assures that the aggregate payments would equal those that would have been made without the changes. Although this provision may require us to reconsider how we account for coding revisions in the future, we note that none of the FY 1991 coding revisions affect DRG assignment. Further, we note that even if we were to adopt either of the commenters' recommendations regarding DRG 121 and DRG 122, there would be no effect on aggregate program payments because of the budget neutrality requirement of section 1886(d)(4)(C)(iii) of the Act.

d. *Total Hip Replacement—Comment:* We received one comment regarding total hip replacement cases. The commenter states that although the proposed rule created a number of new DRGs to resolve various payment inequities, it failed to address the payment problems that exist in the DRGs involving hip replacement. The commenters acknowledged the creation of new ICD-9-CM procedure codes to distinguish initial and revision procedures (which were effective October 1, 1989) but believes that this alone will not adequately address problems causing inequities in payment

for DRGs 209 and 471. According to this commenter, revisions due to infections consume far more resources than either initial joint replacements or revisions without infection. Additionally, the commenter continues, we failed to address the evaluation of a coding change for revision surgery in the proposed rule, as we had promised to do. The commenter requested a review of cost data to identify differences between cases with and without revision and infection.

Response: As the commenter indicated, we introduced new procedure codes to distinguish initial hip replacement procedures from revisions of hip replacement procedures as part of the September 1, 1989 final rule. In that document, we stated we would evaluate the effect of these coding changes on DRG assignment and weights after data reflecting these changes become available (54 FR 36467). The coding changes were effective October 1, 1989 for FY 1990, which does not end until September 30, 1990. Because the data are incomplete at this time, we made no recommendation in the proposed rule.

These new codes will permit the distinction between initial hip replacement and revisions to hip replacements, providing the opportunity to analyze charge differentials between the procedures. We are planning to evaluate the utilization of these procedures, particularly in DRGs 209 and 471, as a part of our analysis of changes for FY 1991.

e. *E Codes.* In the September 1, 1989 final rule, in response to a comment we received on the May 8, 1989 proposed rule, we stated that we would address the issue of E codes as a part of the FY 1991 DRG changes. E codes are used to classify external causes of injury and poisoning. The commenter recommended that the GROUPER be revised so that E codes will no longer affect DRG assignment of cases in MDC 15 (Newborns and Other Neonates with Conditions Originating in Perinatal Period). The commenter noted that cases in MDC 15 with E codes are assigned to DRG 390 (Neonates With Other Significant Problems) and recommended that, even though this is not a major problem for the Medicare population, the GROUPER be modified to eliminate E codes since the GROUPER is used by payers other than Medicare.

It was our intention to address this problem in the May 9, 1990 proposed rule. However, even though we neglected to state in that document that we intended to eliminate E codes as a factor in the DRG classification of cases in GROUPER beginning with discharges occurring on or after October 1, 1990, we have made the change. We believe that since this change has no practical effect on Medicare DRG classification and payment, it is not necessary to formally include it in a proposed rule for comment. Therefore, even though the elimination of E codes as a factor in assigning cases was not included in the May 9 proposed rule, we have included the revision in the final GROUPER.

f. *Clinical Editor—Comment:* We received two comments regarding the HSI (now 3M/HIS) Clinical Data Editor Software, which is used by hospitals for Medicare billing. The two commenters stated that in many cases where a procedure is appropriate for a diagnosis, and is sometimes the only treatment available, the editor flags the procedure as "unlikely with the diagnosis." They pointed out a specific example in which the procedures Simple mastoidectomy (procedure code 20.41) and Excision of a lesion of middle ear (procedure code 20.51) each trigger an "unlikely" flag with the diagnosis of benign neoplasia paraganglia (diagnosis code 227.6). These commenters requested that if 3M/HIS has any relationship with the Medicare program, we assist them in correcting inaccurate information on diagnosis and associated procedures.

Response: 3M/HIS, under contract with HCFA, is responsible for updating and maintaining the GROUPER program, as well as the Medicare Code Editor (MCE) and the Outpatient Code Editor, but this obligation does not include the Clinical Data Editor. This software package is provided to hospitals by 3M/HIS, and we are not involved in its structure or development. However, we believe that the issue that the commenters bring up stems from an underlying GROUPER assignment issue that may need to be addressed. We note that if either procedure code 20.41 or 20.51 is reported with diagnosis code 227.6, and no other related OR procedure is performed, the case will be assigned to DRG 468 (in the case of code 20.41) or, as of October 1, 1990, to DRG 447 (in the case of code 20.51). Thus, these procedures are considered to be unrelated to the diagnosis of benign neoplasia paragranglia.

The commenters appear to be indicating that it may not be appropriate to classify procedure codes 20.41 and 20.51 as unrelated to diagnosis code 227.6. We will include this as an item for analysis in the coming year. However, since this issue was not discussed in the proposed rule, we will make no changes for FY 1991.

C. Recalibration of DRG Weights

One of the basic issues in recalibration is the choice of a data base that allows us to construct relative DRG weights that most accurately reflect current relative resource use. Since FY 1986, the DRG weights have been based on charge data. The latest recalibration, which was published as a part of the FY 1990 prospective payment final rule, used hospital charge information from the FY 1988 MEDPAR file. For a discussion of the options we considered and the reasons we chose to use charge data beginning in FY 1986, we refer the reader to the rules published on June 10, 1985 (50 FR 24372) and September 3, 1985 (50 FR 35652).

We proposed to use the same basic methodology for the FY 1991 recalibration as we did for FY 1990. That is, we proposed to recalibrate the weights based on charge data for Medicare discharges. However, we proposed to use the most current charge information available, the FY 1989 MEDPAR file, rather than the FY 1988 MEDPAR file. The MEDPAR file is based on fully-coded diagnostic and surgical procedure data for all Medicare inpatient hospital bills.

The proposed recalibrated DRG relative weights were constructed from FY 1989 MEDPAR data, received by HCFA through December 1989, from all hospitals subject to the prospective payment system and short-term acute care hospitals in wavier States. That MEDPAR file included data for approximately 9.6 million Medicare discharges. The MEDPAR file updated through June 1990 includes data for approximately 9.9 million discharges and this is the file used to calculate the weights set forth in Table 5 of the addendum to this final rule.

The methodology used to calculate the DRG weights from the FY 1989 MEDPAR file is as follows:

- All the claims were regrouped using the revised DRG classifications discussed above in section III.B of this preamble.
- Charges were standardized to remove the effects of differences in area wage levels, indirect medical education costs, disproportionate share payments, and, for hospitals in Alaska and Hawaii, the applicable cost-of-living adjustment.[2]

[2] In recalibration, charges are standardized to remove the effects of actual disproportionate share payments, including the additional payments resulting from the amendments made by section 6003(c) of Public Law 101-239. This standardization affects only the relative weights and has no direct impact on program payments. In contrast, we used the general exceptions and adjustments authority under section 1886(d)(5)(I) of the Act to implement section 6003(c) of Public Law 101-239 effective April 1, 1990 (55 FR 15177) without restandardizing the base your prospective payment system amounts for the additional disproportionate share payments.

• The average standardized charge per DRG was calculated by summing the standardized charges for all cases in the DRG and dividing that amount by the number of cases classified in the DRG.

• We then eliminated statistical outliers using the same criterion as was used in computing the current weights. That is, all cases outside of 3.0 standard deviations from the mean of the log distribution of charger per case for each DRG were eliminated.

• The average charge for each DRG was then recomputed excluding the statistical outliers and divided by the national average standardized charge per case to determine the weighting factor.

• We established the weighting factor for heart transplants (DRG 103) in a manner consistent with the methodology for all other DRGs except that the heart transplant cases that were used to establish the weight were limited to those Medicare-approved heart transplant centers that have cases in the FY 1989 MEDPAR file. Similarly, we limited the liver transplant cases that were used to establish the weight for DRG 480 to those hospitals that are established liver transplant centers.

• Acquisition costs for kidney, heart, and liver transplants continue to be paid on a reasonable cost basis. Unlike other excluded costs, the acquisition costs are concentrated in specific DRGs (DRG 302, Kidney Transplant; DRG 103, Heart Transplant; and, DRG 480, Liver Transplant). Since these costs are paid separately from the prospective payment rate, it is necessary to make an adjustment to prevent the relative weights for these DRGs from including the effect of the acquisition costs. In previous years with respect to kidney and heart transplant cases and in the proposed rule with respect to kidney, heart, and liver transplant cases, we substracted the actual acquisition charges if shown on the bill, or an estimate of the acquisition charges if no charges were specified on the bill, prior to computing the average charge for the DRG and prior to eliminating statistical outliers. In reviewing the methodology used to establish the weight for liver transplant cases, as discussed above in section III.B.3.b, we determined that if there is no organ acquisition charge specified on the bill, the total charges on the bill do not include a charge for organ acquisition. Therefore, in establishing the final weights, we subtracted from total charges only actual acquisition charges shown on the bill. If no acquisition charges were shown on the bill, no adjustment was made to the total charges. We believe this change will improve the accuracy of the relative weights for the affected DRGs.

The weights developed according to the methodology described above, using the DRG classification changes, result in an average weight before recalibration. Therefore, the new weights were normalized by an adjustment factor so that the average case weight after recalibration is equal to the average case weight prior to recalibration. This adjustment is intended to ensure that recalibration by itself neither increases nor decreases total payments under the prospective payment system.

In developing the FY 1990 weights, we made an across-the-board 1.22 percent reduction to the weights after normalization to take into account increases in the average case weight attributable to reclassification and recalibration changes between FY 1986 and FY 1988 (54 FR 36469). Section 6003(b) of Public Law 101–239 enacted section 1886(d)(4)(C)(ii) of the Act to ratify the 1.22 percent reduction to the DRG weights but required in section 1886(d)(4)(C)(ii) of the Act that reclassification and recalibration changes in subsequent years (beginning with FY 1991) be made in a manner that assures that the aggregate payments are not greater or less than the aggregate payments that would have been made without the changes. Section 6003(b) also enacted section 1886(d)(4)(C)(iv) of the Act to require that the Secretary include recommendations regarding any adjustments to the weights in his annual report to the Congress required under section 1886(e)(3)(B) of the Act on his initial estimate of his recommendation for the prospective payment update factor for the coming year.

We interpret section 1886(d)(4)(C)(iii) of the Act to mean that no adjustment should be made to the DRG weights after normalization to take into account any impact previous reclassification and recalibration changes may have had on aggregate program payments. Accordingly, we have made no adjustment to the DRG weights for the effect the reclassification and recalibration changes we made in FY 1989 (the latest year for which actual data are available) had on aggregate payments.

In his March 1, 1989 report to Congress, the Secretary indicated he did not anticipate making a recommendation to adjust the DRG weights for the effect of the FY 1989 reclassification and recalibration changes. Instead, the effect of the FY 1989 changes is taken into account in his recommendation for the FY 1991 update to the prospective payment system rates (see appendix C).

However, we also interpret section 1886(d)(4)(C)(iii) to require that we ensure the FY 1991 reclassification and recalibration changes do not affect aggregate payments. Although normalization is intended to achieve this effect, equating the average case weight after recalibration to the average case weight before recalibration does not necessarily achieve budget neutrality with respect to aggregate payments to hospitals. Therefore, as discussed in section II.A.4.b of the Addendum to this final rule, we proposed to make a budget neutrality adjustment to assure the requirement of section 1886(d)(4)(C)(iii) of the Act is met.

Comment: One commenter expressed concern that the DRG recalibration may not have been done in an entirely budget neutral way. The commenter noted that a number of the high volume DRGs would have a lower weight in FY 1991 than in prior years. The commenter suggested that there should be a more thorough discussion of the calculation and an outside review of the methodology.

Response: The purpose of the DRG reclassification changes and recalibration is to improve our measurement of relative resource use and to account for changes in resource consumption resulting from changes in practice patterns, technology, and any other factors that may change the relative use of hospital resources. Generally, a significant change in a DRG weight generally results for one or both of the following reasons:

• The DRG was affected by the DRG classification changes; that is, some of the more expensive cases assigned to the DRG were reassigned to a different DRG, thereby lowering the average standardized charges for the remaining cases. Effective for FY 1991, we have created 13 new DRGs with relatively high weights. The reassignment of cases to the new DRGs has a noticeable effect on the weights of any DRGs in which these cases were concentrated prior to reassignment. For example, with the creation of DRG 482 (Tracheostomy with Mouth, Larynx, or Pharynx Disorder), the number of cases in DRG 49 (Major Head and Neck Procedures) declined by 50 percent and the DRG weight decreased from 2.8531 to 2.3274.

• As measured by average standardized charges, the increase in resource use for the cases assigned to the DRG was less than the average increase in resource use. In general, the average resource use for cases assigned to the higher-weighted DRGs have been

increasing more rapidly than the average resource use for cases assigned to lower weighted, less technologically-intensive DRGs. For example, the final FY 1991 weight for DRG 89 (Simple Pneumonia and Pleurisy Over Age 17 with CC) is 1.1878 compared to an FY 1990 weight of 1.2059. (This DRG was largely unaffected by the DRG classification changes.)

As explained above, we normalize the DRG weights after recalibration so that the average case weight after recalibration is equal to the average case weight before recalibration. The normalization calculation can be verified by multiplying the number of cases in Table 7A by their respective FY 1990 relative weights, summing the resulting products, and dividing the total sum by the total number of cases to determine the average case weight for FY 1990. Similarly, the average case weight for FY 1991 is determined by multiplying the number of cases in Table 7B by their respective FY 1991 relative weights, summing the resulting products, and dividing the total sum by the total number of cases to determine the average case weight for FY 1991. Low volume DRGs (those with fewer than 10 cases) and cases in DRGs 469 and 470 should be excluded from the calculation of the average FY 1991 DRG weight. The average weight for FY 1990 and 1991 both equal 1.299.

Section 1886(d)(4)(C)(iii) of the Act requires that the reclassification changes and recalibration be budget neutral. Although normalization is intended to ensure that the reclassification changes and recalibration do not affect aggregate payments, equating the average case weight after recalibration to the average case weight before recalibration does not necessarily achieve budget neutrality. Therefore, as discussed in greater detail in section II.A.4.b of the Addendum to this final rule, we also make a budget neutrality adjustment to the standardized amounts.

When we recalibrated the DRG weights for previous years, we set a threshold of 10 cases as the minimum number of cases required to compute a reasonable weight. In the FY 1988 MEDPAR data used to establish the FY 1990 weights, there were 27 DRGs that contained fewer than 10 cases. We proposed to use that same case threshold in recalibrating the DRG weights for FY 1991. In the FY 1990 recalibration, we computed the weight for the 27 low-volume DRGs by adjusting the original weights of these DRGs by the percent change in the weight of the average case in the remaining DRGs. We proposed to use this same methodology for the FY 1991 recalibration. Using the FY 1989 MEDPAR data set, there are 37 DRGs that contain fewer than 10 cases.

IV. Changes to the Hospital Wage Index

A. Background

Section 1886(d)(2)(C)(ii) of the Act required, as a part of the process of developing separate urban and rural standardized amounts for FY 1984, that we standardize the average cost per case of each hospital for differences in area wage levels. Section 1886(d)(2)(H) of the Act required that the standardized urban and rural amounts be adjusted for area variations in hospital wage levels as part of the methodology for determining prospective payments to hospitals for FY 1984. To fulfill both requirements, we constructed an index that reflects average hospital wages in each urban or rural area as a percentage of the national average hospital wage.

For purposes of determining the prospective payments to hospitals in FY 1984 and 1985, we constructed the wage of index using calendar year 1981 hospital wage and employment data obtained from the Bureau of Labor Statistics' (BLS) ES 202 Employment, Wages and Contributions file for hospital workers. Beginning with discharges occurring on or after May 1, 1986, we have been using a hospital wage index based on HCFA surveys of hospital wage and salary data as well as data on paid hours in hospitals. The methodology used to compute the first HCFA wage index was set forth in detail in the September 3, 1985 final rule (50 FR 35661).

For discharges occurring on or after May 1, 1986 and before October 1, 1987, the wage index was based on wage data from calendar year 1982. For discharges occurring in FY 1988 and FY 1989, the wage index was based on an equal blend of calendar year 1982 and 1984 wage data. In determining prospective payments to hospitals in FY 1990, we used 1984 data.

Beginning in FY 1989, because of the enactment of section 4005(a) of the Omnibus Reconciliation Act of 1987 (Pub. L. 100–203), which added a new section 1886(d)(8)(B) to the Act, we have also made revisions to the wage index to take into account rural counties whose hospitals are deemed urban. These revisions are discussed in detail in section IV.F of this preamble.

B. Updating Hospital Wage Survey

Section 1886(d)(3)(E) of the Act (as amended by section 6003(h)(6) of Pub. L. 101–239) requires that wage indexes that are applied to the labor-related portion of the national average standardized amounts of the prospective payment system be updated not later than October 1, 1990, updated again not later than October 1, 1993, and updated annually thereafter. This section further provides that the Secretary base the update on a survey of the wages and wage-related costs of hospitals in the United States that participate in the prospective payment system. The survey should measure, to the extent feasible, the earnings and paid hours of employment by occupational category and must exclude data with respect to the wages and wage-related costs incurred in furnishing skilled nursing facility services. In addition, section 1886(d)(3)(E) of the Act requires that any updates to the wage index be budget neutral with respect to aggregate payments. A discussion of the budget neutrality adjustment is included in the addendum to this final rule at section II.A.4.a.

To accomplish the FY 1991 update, we developed two wage index survey forms. The first form (Form A) requested data similar to past surveys, with a few noted exceptions. In addition to the total wages and hours collected in past surveys, Form A also asked for data relative to the salary and hours associated with direct patient-care contracted labor, home office, and fringe benefits. Form A excluded salary and hours associated with the skilled nursing facilities and other nonhospital cost centers. The second form (Form B), in addition to the data requested on Form A, requested data relative to several occupational categories.

Before initiating the new hospital wage survey, the proposed forms (A and B) were submitted for prior consultation to various hospital industry representatives, including the major hospital associations, as well as to the fiscal intermediaries. we solicited comments on both forms, including the feasibility of obtaining accurate data. The comments we received suggested that most hospitals would be unable to accurately provide data by occupational categories at this time. As a result of the comments on these two forms, we modified Form A, now referred to as HCFA–2561.

The HCFA–2561 was used to collect data from all prospective payment hospitals for cost reporting periods ending in calendar year 1988 for the FY 1991 updates to the wage index as required by section 1886(d)(3)(E) of the Act.

C. Revision to the Hospital Wage Index for FY 1991

We proposed to base the FY 1991 wage index, effective for hospital discharges occurring on or after October 1, 1990 and before October 1, 1991, entirely upon the data collected in the 1988 wage survey which is described above in section IV.B of this preamble. On the basis of consultation with the hospital industry prior to our 1988 wage survey, public comments on the future wage index update issues presented in the May 8, 1989 proposed rule, the results of our validation of data from the 1988 wage survey, and subsequent consultation with industry representatives, we proposed to use all of the categories of data, with the exception of contract labor, collected for 1988. Therefore, the FY 1991 hospital wage index reflects the following:

- Total hospital salaries and hours, excluding salaries and hours associated with skilled nursing facility or other nonhospital cost centers.
- Home office salaries and hours.
- Fringe benefits associated with hospital and home office salaries.

The exclusion of nonhospital costs and the inclusion of fringe benefits and home office costs represent changes from the FY 1990 hospital wage index.

We proposed to exclude nonhospital costs from the wage index based on the statutory requirement in the amended section 1886(d)(3)(E) of the Act, which requires exclusion of skilled nursing facility costs. We believe that it is consistent to exclude salaries allocated to other nonnhospital cost centers that are not directly related to the provision of hospital care and might distort the comparability of wage data.

We proposed to add home office salaries and hours, and fringe benefits to the FY 1991 wage index as a result of continual hospital industry requests, reinforced by the comments received in response to the May 8, 1989 proposed rule, that we expand the index to reflect all relevant hospital wage costs. An evaluation of the feasibility and validity of including added hospital wage cost components, beyond direct hospital staff salaries, began with the initial testing and evaluation of the 1988 survey described in section IV.B of this preamble, and continued through the administration of that survey, followed by an extensive survey editing and validation process conducted in close consultation with the fiscal intermediary staff familiar with each hospital's fiscal operations. Below is a discussion of each wage cost component we considered.

- Patient care related contract services.

The wage survey requested labor-related payments and hours attributable to direct patient care-related contract services. We instructed hospitals to exclude nonpatient care services, such as management and housekeeping services, and nonlabor-related payments, such as payments for equipment and supplies. Any services for which labor-related payments or hours could not be accurately determined were to be excluded. A majority of the commenters on the May 8, 1989 proposed rule supported the inclusion of contract services and many of those argued that this component should be expanded to include nonpatient care services as well. Those opposing the inclusion of contract services, and even some of those who supported including contract services, indicated concern over the difficulty in accurately tracking recording hours worked for all types of contract services. Others are also concerned that if the contract wages are associated with a labor market area different from that in which the hospital is located, the contract wages would artificially increase or decrease the hospital's area wage index.

Based on our analysis of the public comments and data from the 1988 survey, we proposed to exclude contract services from the current wage index. This decision stemmed from the industry's concern about hospitals ability to accurately track and record contract labor hours and the following observations, based on our analysis of the data received in response to the survey:

—The national average hourly contract rate was more than three times the basic average hourly wage for all hospitals reporting contract services.

—Over 5 percent of the hospitals reporting contract services had an average hourly contract rate in excess of $55.00 per hour and 2 percent exceeded $100.00 per hour.

—A major source of high contract labor costs appears to be certified registered nurse anesthetists (CRNAs) and physicians. Intermediaries were inconsistent in their handling of CRNAs and Medicare Part B physician services; that is, some intermediaries included CRNAs and part B physician services while others excluded them. We do not believe that direct patient care services furnished by physicians should be included because they are paid on a reasonable charge basis under Medicare part B rather than as hospital service. Similarly, since CRNAs (except for those serving small rural hospitals) began billing Medicare directly effective January 1, 1990 under part B, contract CRNA services are also not an appropriate factor in our calculation of the hospital wage index. Moreover, a number of hospitals clearly had difficulty reporting the actual number of hours worked by CRNAs (and appeared to report hours based on time units for anesthesia services instead).

- Finally, only 50 percent of hospitals reported contract services. At least 11 percent of those not reporting contract services. At least 11 percent of those not reporting contract services indicated they would have reported the expenditure if they had been able (as instructed) to determine accurately the actual hours worked.

We believe the above inconsistencies in reporting on the 1988 survey would result in inequitable treatment of those hospitals that appropriately did not report contract CRNAs and part B physician direct patient care services, as well as those that were unable to accurately determine hours for other direct patient care contract services. Therefore, we proposed to exclude contract labor from the FY 1991 wage index and develop more detailed instructions and auditing criteria that may allow its inclusion in future wage index updates.

- Home office salaries and hours.

The wage survey collected data on salaries and fringe benefits for home office personnel that provide services to the hospital. The home office compensation costs were to be allocated to the hospital based on a recognized cost allocation methodology. A majority of those commenting on the May 8, 1989 proposed rule supported the inclusion of home office salaries and hours in the hospital wage index, and most of those believe that all home office salaries should be included. Those opposing use of home office salaries were concerned about possible distortions due to home office wage coming from high and low cost wage areas other than that of the hospital.

Reporting of home office hours was very consistent on the 1988 survey. It also represented a small component of hospital hours and expenditures. As an overall average, this category represented 0.88 percent of total hours and approximately 1 percent of salaries for the hospitals reporting. In addition, hospitals seemed to have no trouble in providing wages and hours associated with home offices. Home office salaries tend to be for the top administrative staff (for example, chief executive officers, chief financial officers, and divisional vice presidents) so failure to

include these salaries can significantly distort the hourly rate for small hospitals that rely upon the home office for these services.

Based on our analysis of the survey results and the public comments, we proposed incorporating home office salaries and hours in the FY 1991 wage index. We believe the danger of distortion caused by home offices in divergent wage areas is outweighed by the need to provide equitable treatment to hospitals using home offices to increase their organizational efficiency.

• Fringe benefits.

The wage survey collected data on employee compensation other than salary such as FICA taxes, pension costs, health and life insurance, perquisites, unemployment taxes, workers' compensation, and deferred compensation. Other compensation such as bonuses, and sick and vacation leave were excluded from fringe benefits since these costs are already included in hospital salaries. All of those commenting on the question concerning fringe benefits in the May 8, 1989 proposed rule were in favor of adding this component the wage index. They cited fringe benefits as an important and expanding component of hospital compensation packages as competition for staff increases. Based on our analysis of the comments and validation of the 1988 survey data, which revealed very consistent reporting of these costs, we proposed to include fringe benefits in the FY 1991 wage index.

• Occupational mix data.

Section 1886(d)(3)(E) of the Act (as amended by section 4004(a) of Pub. L 100–203) also requires that beginning with the FY 1991 wage index, the index should reflect, to the extent feasible, the earnings and paid hours of employment by occupational category. However, during the prior consultation phase of our evaluation of proposed forms for the 1988 wage survey, various hospital industry representatives, including the major hospital associations and the Medicare fiscal intermediaries, strongly opposed collecting these data. They were nearly universal in asserting that hospital records and books are not set-up to identify and classify employees into categories for which consistent definitions have often not been established. As a result, the version of the 1988 survey designed to collect this data was not used.

The public comments in response to the May 8, 1989 proposed rule were consistent with the previously noted industry position. All but two commenters opposed collection of occupational-specific data at this time, arguing that it would be of questionable value for measuring real differences in labor costs among wage areas. Many commenters indicated doubt as to whether this approach would ever be of value, and nearly all recommended, as a minimum, a thorough evaluation of the issue before implementing such a data collection effort.

In view of these comments, we did not request occupational-specific data in the 1988 wage survey; therefore, the FY 1991 wage index will not take occupational mix into account.

In its March 1, 1990 report, ProPAC recommended that we begin immediately to collect data on employee compensation and paid hours of employment for hospital workers in each occupational category and that, after collecting these data, we should carefully evaluate the effect of adjusting the area wage index for differences in the occupational mix of employment (Recommendation 8). However, we believe any decision on obtaining wage data by occupational category for use in future wage indexes must be preceded by a formal evaluation of the value, feasibility, and impact of the collection and use of occupation-specific wage data for indexing hospital wage costs.

We do not believe that it is appropriate at this time to place the additional reporting burden on the hospital industry associated with such a data collection effort when it is clear whether an occupationally-adjusted wage index would in fact more accurately distribute payments to hospitals.

ProPAC believes that the wage index, as currently constructed, overcompensates certain large urban hospitals due to the fact that the case-mix index already reflects the higher intensity of labor costs these hospitals incur, and, therefore, the cost of labor is essentially double-counted in paying these hospitals through both a higher case mix index and wage index relative to other hospitals. As a result, the system overcompensates for the more complex and higher-weighted DRGs that require the services of more highly trained professionals and that are more often treated in large urban and teaching hospitals. Conversely, ProPAC believes that hospitals with a lower occupational mix, which are often located in rural areas, are disadvantaged by the payment system. However, we believe that ProPAC may be overstating the extent of this problem since the standardization process used to recalibrate the DRG relative weights removes the effects of area wage differences from the case mix measure.

Therefore, until we can determine whether the benefits associated with the use of a wage index adjusted for occupational mix outweigh the additional administrative burden that developing such an index would entail, we do not plan to collect wage data by occupational category. However, we believe that continued research on the wage index is pertinent and that future refinements should be considered if it is clear that the result would be a more accurate measure of relative labor costs. We will use the wage index that ProPAC has adjusted for occupational mix as the starting point for our evaluation of this issue.

Comment: One commenter was unsure whether to include residents and interns in the wage survey data and stated that the instructions were unclear. Other commenters requested that we eliminate the salaries of teaching physicians and interns and residents in approved teaching programs (listed on lines 21–24 of worksheet A of the Medicare cost report) because they are paid under Medicare on a different basis. In addition, one commenter advocated the inclusion of all residents and interns and physician part A services in the wage survey data.

Response: Interns and residents should be included in the wage survey data only if they are part of an approved teaching program and the hospital pays their salaries. Payments to another hospital for services provided by a resident that is salaried by the other hospital should be excluded. The instructions for the survey state that salaries on line 70 of worksheet A, column A of the Medicare cost report (Interns-Residents srvc—not in approved teaching program) should be excluded. These interns and residents are paid under Medicare Part B and should be excluded from the wage survey. Salary costs for the time teaching physicians spend supervising residents in approved teaching programs and the salaries of those residents are paid as a hospital service and should be included in the 1988 wage survey data. With regard to future wage data, we will give consideration to the comment that since graduate medical education is paid on a separate basis, the associated salary costs should be excluded from the wage index.

Comment: We received a number of comments about our decision to exclude contract labor data from the wage index update. A number of commenters opposed the inclusion of contract labor, in particular noting that it is very difficult to determine the hours worked by contract workers, and that our definition of contract labor is difficult to understand. On the other hand, many

commenters are concerned because they hire many of their registered nurses on a contract basis and believe contract labor should be included. One commenter requested that we delay the implementation of the new wage index until reliable contract labor data can be included.

Response: Our analysis of the data from the 1988 wage survey led us to propose excluding contract services from the current wage index for a variety of reasons. Only 50 percent of hospitals reported contract services, and at least 11 percent of those not reporting these services indicated that they incurred contract labor costs but could not accurately determine the hours worked. In addition, the national average hourly contract wage was much higher than we expected, in large part because of the inclusion of certified registered nurse anesthestists (CRNAs) and physicians. Both of these services are generally billed directly under Medicare part B, and thus we believe should not be included in the wage index. Approximately two thirds of the wage index values would decrease if the data on contract labor were included, thus unfairly penalizing those hospitals that correctly did not report CRNA and direct patient care services furnished by physicians, as well as those hospitals that could not accurately report data on worked hours associated with contract services. For 339 of the 405 MSAs we studied, there was less than a 1 percent differences between the value of the wage index with contract labor and without contract labor; the average was a change of −0.11 percent (−0.16 percent for urban index values and +0.24 percent for rural index values). We are in the process of developing more detailed instructions on the reporting of contract labor costs as part of the Medicare cost report that may allow the inclusion of contract labor data in future wage index updates. We note that the statute requires that we implement this update to the wage index effective October 1, 1990, and thus we cannot wait until we have accumulated reliable contract wage data, as suggested.

Comment: Several commenters asserted that since contract labor is defined more narrowly than in-house labor, some contracted services such as laundry and dietary services appropriately paid by the prospective payment system will be excluded from the wage data once contract labor is included. Some commenters opposed to the inclusion of contract labor are concerned that it could add many nonlabor costs to the wage index. One commenter urged that we use only recent contract labor data (defining recent as less than 18 months from the beginning of a provider's cost report) in determining prospective payment system payments. The commenter believes that the expense of contract labor is extremely variable since hiring contract labor is often a short-term response to a change in staffing needs.

Response: Contract labor is defined narrowly to balance our concerns about properly recognizing only hospitals' labor costs for providing patient care. Many contract labor services include overhead costs and supply costs for the contractor as well as wages paid. We believe it is inappropriate to introduce this distortion into the wage index, and that any contract labor costs reflected in the wage index should be limited to cases where the labor is directly related to patient care (such as contract nursing.) We will continue our analysis of the contract issue. We note that fluctuations in contract labor needs would potentially distort the wage index only if all hospitals included in an area's wage index value have similar contract labor needs at the same time.

Comment: Several commenters urged the inclusion of contract labor data in this update of the wage index. One commenter stated that the distribution of contract labor wages in very similar to the distribution of home-office wages and concluded that both types of data should be included in the wage index. Other commenters asserted that the exclusion of contract labor data from the wage index was an arbitrary decision that hurts rural hospitals.

Response: As stated above, we feel that the contract labor data is inaccurate for a number of reasons. We were particularly concerned about the hospitals that stated they had contract labor expenses but could not accurately determine the associated hours worked for the survey. In contrast, the data on home-office hours and salaries were consistent because there were no hospitals with home-office workers that stated that they could not provide the data. In addition, we have edited the home-office data to eliminate aberrant results. We have asked the intermediaries to verify all home-office wage rates in excess of three standard deviations above the mean home-office rate, that is, $81.25. If the intermediary cannot verify the wage rate, we have excluded the home-office data for the hospital from the data base. The average home office wage rate for only six hospitals was above the $81.25 figure; four of these figures were the result of errors in the wage survey and have been corrected, while the other two were verified as correct by the intermediary.

Comment: Several commenters strongly supported inclusion of home office data and fringe benefits in the wage index. In addition, our commenters suggested that although the statute and regulations require an adjustment to the labor-related portion of the PPS rate, they require that the adjustment be based on variation in wage levels only and should not reflect variation in other base-related costs such as employee fringe benefits. However, a few commenters expressed concern that pension costs are too variable to be included in the wage index. In particular, the commenters are concerned that stock market and interest rate fluctuations and changing actuarial profiles will have a large effect on pension expenses, and thus on wage index values. Of particular concern is the effect of pension credits caused by changing actuarial profiles—the adjustment is made against the pension expense of the current year, but is actually related to pension costs from previous years. Another commenter expressed concern that the instructions about the inclusion of fringe benefits were unclear.

Response: Section 1886(d)(5)(E) specifies that the adjustment to the labor-related portion of the prospective payment rate for relative wage levels shall be based on a survey of wages and wage-related costs. Thus, to the extent the Secretary determines appropriate, the statute provides authority to include wage-related costs as well as wages in the wage index. We believe that pension costs are a very important part of a hospital's labor costs and should be included in the wage index. We note that some year-to-year variation in the experience of an individual hospital may be mitigated in the wage index by differing experiences for other hospitals included in the area's wage index value. We will examine the issue of pension credit effects and will consider a change in the future wage index updates. Further, we will clarify the instructions governing fringe benefits when the survey is incorporated into the Medicare cost report. Finally, we are amending § 412.63(1) to clarify that the labor-related portion of the prospective payment system is adjusted to reflect relative costs for wages and other wage-related costs.

Comment: Several commenters requested that a hospital in their region be excluded from the wage index calculations because it was no longer an acute care facility. They were also

concerned about a hospital that had very few acute care admissions. Another commenter was concerned because a number of the included hospitals in the commenter's State are primarily large nonacute care hospitals, in which their prospective payment system payments are a result of small acute care infirmaries in these facilities.

Response: We eliminated any hospital that had no acute care stays from the survey. In accordance with section 1886(a)(3)(E) of the Act, all hospitals receiving payment under the prospective payment system must be included in the wage survey used to update the wage index. In addition, we have analyzed the effect of continuing to include facilities with low acute care admissions in the wage index and generally found no adverse results.

Comment: Several commenters supported the exclusion of nonhospital wage data from the wage index. However, two commenters believe that wage data for hospital support services (communications, data processing, admitting, accounts receivable, dietary, nursing administration, central supply, medical records and social services) that are used to support hospital-based skilled nursing facilities and other components that are not furnishing hospital services should be removed form the wage survey data. Specifically, the commenters suggested an additional step-down allocation process to determine the hours and salaries from these overhead cost centers that should be allocated to the skilled nursing facilities and other nonhospital components.

Response: The difficulty with implementing the commenters' suggestion is that many hospitals cannot accurately report the hours allocated to support services for the nonhospital components. In particular, there was no vehicle for doing so on the current wage survey. We will, however, study methods for excluding the overhead costs attributable to nonhospital services in future wage index updates.

Comment: One commenter stated that the use of industry-specific wage indexes does not take into account that hospitals must compete with other industries for certain employees, such as computer programmers.

Response: The hospital wage index is based on the reported wage costs of the hospitals themselves. The wage index is intended to reflect variations in the average hospital labor costs across areas. To the extent that hospitals employ personnel in job categories that are not specific to health care, the costs are reflected in the wage and hour data submitted by the hospitals, and thus in the wage index.

Comment: Many commenters have expressed reservations about the cost control incentives produced by the wage index. Specifically, these commenters believe that those hospitals that have lowered their labor costs are penalized with a lower wage index value, while those hospitals that maintain higher labor costs are rewarded with a higher wage index value. One commenter believes that nonunion hospitals would be unfairly affected for the same reason. Another commenter believes that lower wage index values will endanger many hospitals' financial viability and also believes that areas with higher index values will be able to raise their salaries, thus enticing already scarce employees away from those areas with low labor costs.

Response: The wage index is not intended to be a cost control mechanism. Rather, the purpose of the wage index is to measure variations in labor costs across areas so that hospitals receive payment that reflects their relative wage level. As the commenters note, the wage index adjusts payments so that those hospitals in areas with high labor costs receive a higher payment than those hospitals in areas with lower labor costs. If this adjustment were not made, hospitals in areas with higher labor costs would not receive adequate payment to maintain their current level of services while hospitals in areas with low labor costs would receive payments in excess of their costs. We believe the wage-adjusted payment levels appropriately recognize actual differences in costs across areas and provide adequate payment to hospitals for their labor and other costs required to efficiently deliver inpatient care.

Because of the time lag between the data used to construct the wage index and the year in which the index is applied to hospital payments, we do not believe that the wage index provides an incentive for hospitals to raise their wages (nor does it force hospitals to lower them).

Comment: Some commenters believe that the entire wage index system is unfair to rural hospitals. They suggested that the wage index should be the same for all areas. Another commenter urged that we consider the unique vulnerability of high Medicare utilization hospitals in the construction of the wage index.

Response: Section 1886(d)(5)(E) requires that the labor-related portion of the prospective payment rate be adjusted for geographic variation in wages and other wage-related costs. Moreover, we believe that the wage index is an appropriate payment mechanism for recognizing labor cost differentials across areas. We believe the extent to which rural hospitals incur labor costs lower than hospitals in other areas should be reflected in their payment rates. The wage index applicable to high Medicare utilization hospitals appropriately reflects wage costs for the labor market areas in which these hospitals are located. We do not believe it is appropriate to use the wage index as a vehicle for providing additional payments to a specific class of hospital.

Comment: Two hospitals that renegotiated labor contracts during 1988 and 1989 request that these predictable wage change be included in the wage data. One commenter suggested that the higher labor cost resulting from a 1989 nurse recruiting drive at a nearby hospital be included as well.

Response: We believe that it would not be equitable to make such adjustments to the wage data, and that it is necessary to use standard data for the same time period in order to ensure that the wage index appropriately reflects relative labor costs for a given point in time.

Comment: Two commenters urged that we use different geographic classification schemes in our construction of the wage index. One of those commenters advocated that we divide MSAs into core cities and surrounding regions, while the other commenter advocated the division of rural areas into those higher-volume rural hospitals with more than 18,000 annual adult and pediatric patient days, and lower-volume rural hospitals. Both commenters believe that the subsets they have constructed face qualitatively different labor costs, and should not be a part of the same labor market area for construction of the wage index.

Response: In reality, any method of geographic classification will fail to be satisfactory for all hospitals. In the past, we have analyzed different labor market configurations and have been unable to identify an alternative labor market definition that would result in a considerably more accurate system. However, we recognize that the current system does have shortcomings. Therefore, we are continuing to examine this isssue as part of our analysis on the elimination of separate urban and rural payment rates required under section 6003(i) of Public Law 101-239. We will include any recommendations that we develop on labor market area definitions in our report to Congress on a single rate system.

We also note that section 6003(h)(1) of Public Law 101-239 added section 1886(d)(10) to the Act to provide for the establishment of the Medicare Geographical Classification Review Board (MGCRB) to consider applications for geographic reclassification. The MGCRB will consider the application of prospective payment hospitals requesting geographic classification changes for purposes of determining their standardized amount or the applicable wage index or both. We are issuing a separate interim final rule to implement this provision.

Comment: A commenter from Ohio states that it is unreasonable that the commenter's wage index value decreased, since nonhospital wages, such as manufacturing wages, increased in his city relative to other Ohio cities.

Response: We examined the wage index values of Ohio, and found that the relative positions of Ohio's MSAs stayed almost the same between the current wage index and the wage index update: that is, almost all of Ohio's MSAs experienced a decline in their wage index values. This is possible because the wage index compares the labor cost experience to hospitals in an MSA with the national hospital average hourly wage, not a state wage value. It therefore appears that hospital labor costs in Ohio increased more slowly than did the national average, resulting in the nearly across the board decreases.

Comment: One commenter wrote to support the inclusion of occupational mix effects in the construction of the data base, while others advocated beginning data collection.

In addition, one commenter suggested several methods of including occupational mix data. However, the majority of the commenters opposed the inclusion of any occupational mix data in the wage index, stating that the reporting burden was too great. These commenters emphasized concern over reporting cost and confidentiality problems associated with the collection of occupational mix data.

Response: Occupational mix data were not included in this update of the wage index because hospitals indicated they would be unable to collect accurate data for hours by employee category for two reasons—consistent definitions have frequently not been established for these categories, and hospital records and books are not set up to identify and classify, employees into categories.

We continue to believe that the imposition of any reporting burden of this magnitude must be preceded by a careful evaluation of the value, feasibility, and impact of the collection and use of occupation-specific wage data for indexing hospital wage costs. We are currently proceeding with this evaluation and thank the commenters for their suggestions.

D. Updating the Wage Index Data

As noted in section IV.C above, we proposed that the FY 1991 wage index be based on data from the 1988 wage survey. The wage index would be comprised of data from 5,518 hospitals paid under the prospective payment system and short-term acute care hospitals in waiver States. The method used to compute the proposed wage index is as follows:

Step 1—Each of the non-Federal acute care hospitals subject to the prospective payment system for which survey data for the hospital's fiscal year ending in calendar year 1988 have been received was classified into its appropriate urban or rural area based on the urban area definitions to be used in the prospective payment system in FY 1991. See discussion in IV.G, below, for the classification of certain rural hospitals that are deemed urban.

Step 2—For each hospital, the excluded salaries (that is, salaries attributable to skilled nursing facility and other nonhospital components) were subtracted from gross hospital salaries to yield net hospital salaries. These net hospital salaries were then increased by the addition of hospital fringe benefits and any home office salaries and fringe benefits reported by the hospital to yield total salaries plus fringe benefits.

Step 3—For each hospital, the total salaries plus fringe benefits resulting from Step 2, were inflated or deflated, as appropriate, to a common period to determine total adjusted salaries. This adjustment used the percentage change in average hourly earnings for each 30-day increment from February 14, 1987 through January 15, 1989, for hospital industry workers from S.I.C. 806, Bureau of Labor Statistics Employment and Earnings Bulletin.

Step 4—For each hospital, the excluded hours reported were subtracted from the gross hospital hours to yield net hospital hours. These net hours were then increased by the addition of any reported home office hours to yield total hours.

Step 5—Within each urban or rural wage index area, the total adjusted salaries plus fringe benefits obtained in Step 3 was summed for all hospitals in that area to yield the total adjusted salaries plus fringe benefits for the entire wage index area.

Step 6—The total adjusted salaries plus fringe benefits obtained in Step 6 was then divided by the sum of the total hours (from Step 4) for all hospitals in each wage index area to yield an average hourly wage for the area.

Step 7—The total adjusted salaries plus fringe benefits obtained in Step 3 was summed for all hospitals in the Nation and then divided by the national sum of total hours from Step 4 to arrive at a national average hourly wage. For FY 1991, the national average hourly wage is $13.9399.

Step 8—For each urban or rural wage index area, the hospital wage index value was calculated by dividing the area average hourly wage obtained in Step 7 by the national average hourly wage computed in Step 8.

Comment: One commenter believes that the inflation factors applicable to the various fiscal year ends of the wage index surveys may not have been calculated properly. This commenter proposed a slight variation in the calculation, which does not amount to a statistically significant difference in the wage index.

Response: Currently, the wage index inflation factors are calculated based on the percent change shown for the corresponding year (in this case, 1988) in the hospital portion of the wages and salaries component of the market basket. This is the average hourly earnings of hospital workers. At the time the wage index survey work for 1988 began, 6.74 percent was the rate of change in this component. This number is then converted to an average monthly compounded factor which is applied to the entire period on a monthly basis using the midpoint of the applicable fiscal year end. We believe that this is appropriate since the wage index survey is based on one specific year of data, even though the midpoints may be located in other years.

However, we did find that the commenter was correct in one discrepancy that concerned the final two digits of the August/September 1988 inflation factor. This correction has been incorporated into the wage index inflation factors.

Comment: Several commenters pointed out that the current process of calculating the wage index discriminates against those hosptials whose 1988 fiscal year was shorter than twelve months, because their labor cost experience would be under-represented in their region's wage index. The commenters advocate the resubmission of data for these hospitals, using calendar year 1988 as a proxy for the hospital's cost reporting period. The commenters opposed multiplying the fiscal year results by a factor of twelve

divided by the number of months in the fiscal year (for instance, a six month fiscal year multiplied by two), stating that the labor costs of the hospital may have varied over the course of the year, and thus not be reflected accurately by the short-period fiscal year data.

Response: The commenters are correct in stating that hospitals with fiscal years shorter than twelve months are inappropriately represented in the wage data. Hospitals with short fiscal years are under-represented, and hospitals with long fiscal years are over-represented. Therefore, we have divided all data by the number of months in the hosptial's reporting period and then multiplied by twelve before computing the final values of the wage index. We believe that this method is the most expedient way to address the inequity.

Allowing hospitals to submit 1988 data that do not coincide with their cost reporting periods would be problematic since the Medicare cost report serves as the basis for verifying salary data reported on the wage survey form. Extensive auditing and verification of the data by the fiscal intermediary would be required to ensure its accuracy. Moreover, we do not believe that any variation in labor costs during the year would be significant enough to bias the wage index to any great extent.

E. Phase-In of New Hospital Wage Index

Currently, the hospital wage index is based solely on 1984 survey data. We proposed to base the FY 1991 wage index solely on 1988 survey data. We believe the intent of section 1886(d)(3)(E) of the Act (as amended by section 4004(a) of Pub. L. 100–203) is that the FY 1991 wage index reflect more recent (that is, the 1988) survey data. Furthermore, we believe that with the inclusion of fringe benefits and home office compensation costs and the exclusion of nonhospital costs, the proposed FY 1991 wage index is a more comprehensive and appropriate measurement of relative labor costs among wage areas. Finally, based on the use of more detailed instructions and more rigorous scrutiny of hospital surveys by the fiscal intermediaries, and the results of our editing and validation process, we have concluded that the data from the 1988 wage survey are more accurate than the data collected in previous years.

However, since wide swings were noted for some wage areas between the current and the new area wage index values, we proposed to implement a one year phase-in of the updated wage index for FY 1991 by limiting the percentage change in the proposed wage index compared to the current wage index. We believe such a phase-in is appropriate for those areas experiencing the most significant changes in their wage index values. Therefore, we proposed that if the change from the current wage index to the new wage index would result in an increase or decrease of more than 10 percent in the wage index value, the FY 1991 wage index value would be set at a level that would limit the percentage change to 10.0 percent plus 50 percent of the remaining difference between the actual impact of the new wage index and 10.0 percent. For example, if the current index value for an area is .9000 and the proposed index value is .7650, the new wage index would decrease the area wage index by .1350 or 15 percent. We proposed to limit the decrease to 12.5 percent (.10 + (.5 × .05)) or .1125 pecentage points. Therefore, in this situation, the area's wage index would be .7875 for FY 1991 and .7650 for FY 1992. The phase-in adjusted index would be in effect for FY 1991 while the actual computed index would apply as of FY 1992. Due to the significant impact of the proposed area wage index on prospective payments to hospitals in some areas, we believe that such a phase-in is appropriate since it minimizes abrupt changes in payments during the first year of implementation of the new wage index.

Comment: A number of commenters expressed concern over the significant changes in the wage index values. While most commenters believe that a phase-in is necessary, several different methods were suggested. Some of the most common suggestions are that the index for FY 1990 be based on:

- A blend of 75 percent 1988 data and 25 percent 1984 data, with the index for FY 1992 based entirely on the 1988 data.
- A blend of 50 percent 1984 data and 50 percent 1988 data.
- 100 percent 1988 data. However, the change in the wage index value should be limited to 5 percent plus half of the remaining difference between the values of the indexes using 1984 and 1988 data.
- The cap should only apply to decreases in the wage index values but not increases.

In addition, some commenters suggested implementing the proposed wage index, without modifications. Finally, some commenters advocated adopting the actual wage index values using 1988 data, without any caps.

Response: We believe that the proposed method selected to phase in the wage index appropriately uses more recent data while protecting hospitals from large changes in their payments. We believe the 1988 wage data is significantly improved over the 1984 data and that it would not be appropriate to continue to use the 1984 wage data to construct the hospital wage index. Not only does the 1988 data reflect more recent labor costs incurred by hospitals, but it also provides a more complete database for measuring labor market variations since it includes data on fringe benefits and home office salaries. Moreover, we believe that the use of 1988 data is consistent with the intent of section 1886(d)(3)(E) of the Act (as amended by section 4004(a) of Pub. L. 100–203), which requires that we update the wage index by October 1, 1990 on the basis of a survey conducted by the Secretary. By requiring the Secretary to conduct a survey to update the wage index, Congress clearly intended that the wage index reflect more recent data (that is, the 1988 data as opposed to 1984 data). This section also requires that the updated wage index exclude wage costs incurred in furnishing skilled nursing facility services. The 1984 survey data does not exclude skilled nursing facility salaries as required by the statute.

We realize that the new wage index will result in large changes in payments for some hospitals. We agree that phase-in is called for, and believe that the method we have chosen appropriately balances the need to protect hospitals from large decreases in their payments with the need to compensate hospitals that have faced higher labor costs. However, because of the concern expressed by commenters that the 10 percent phase-in threshold may not adequately protect hospitals from large shifts in payments, we have reduced the threshold to 8 percent (that is, we are limiting the percent change in the wage index to 8 percent plus 50 percent of the remaining difference between the actual impact of the final wage index and 8 percent). We note that any change in payments resulting from a change in the wage index must be implemented in a budget-neutral fashion. As a result, we believe the phase-in of the wage index should apply equally to hospitals that will receive an increase in payments as for hospitals that will receive lower payments.

F. Revisions to the Wage Index for Rural Counties Whose Hospitals are Deemed Urban

Under section 1886(d)(8)(B) of the Act, for discharges occurring on or after October 1, 1988, hospitals in certain rural counties adjacent to one or more Metropolitan Statistical Areas (MSAs) are considered to be located in one of the adjacent MSAs if certain standards are met. Under this provision, as a part

of the September 30, 1988 prospective payment system final rule, we classified the wage data for those rural areas as if the hospitals in those areas were located in the adjacent MSAs and recomputed the wage index values for the affected MSAs and rural areas.

Because inclusion of the wage data from rural hospitals that are considered to be located in an adjacent MSA under section 1886(d)(8)(B) of the Act resulted in the reduction of the wage index values of several MSAs and rural areas, Congress enacted section 8403(a) of the Technical and Miscellaneous Revenue Act of 1988 (Pub. L. 100-647). Under that provision, which added a new section 1886(d)(8)(C) to the Act, if the inclusion of wage data from rural hospitals now considered to be located in an urban area resulted in a reduction of the wage value for the affected MSA or rural area, then the wage index values for those affected areas were determined as if section 1886(d)(8)(B) of the Act had not been enacted. The wage index value for those rural counties with hospitals that were deemed urban were determined on a county-specific basis as if the county were a separate urban area. This provision was implemented as part of the September 1, 1989 prospective payment system final rule (54 FR 36476).

For some hospitals in counties redesignated as urban under the provisions of section 1886(d)(8)(B) of the Act, the application of county-specific wage index values for FY 1990 resulted in lower total prospective payments than what those hospitals had received in FY 1989 because those hospitals were now subject to a lower wage index value. For some redesignated hospitals, such as those that had a county-specific wage index value lower than the Statewide rural wage index, the decrease in payment was significant. In fact, the county-specific wage index value was sufficiently low in some cases that the hospitals redesignated as urban received lower payments than when they had been designated as rural.

In order to address the adverse impact on certain redesignated hospitals that resulted from the implementation of section 8403(a) of Public Law 100-647, Congress, in section 6003(h) of Public Law 101-239, revised the methodology for applying the wage index to hospitals affected by section 1886(d)(8)(B) of the Act.

Under section 6003(h)(3) of Public Law 101-239, section 1886(d)(8)(C) of the Act was revised with respect to discharges occurring on or after April 1, 1990. The provision revises the application of the wage index to redesignated hospitals based on the hypothetical impact the wage data from these hospitals would have on the wage index value of the MSA to which they have been redesignated.

- If including the wage data for the redesignated hospitals reduces the MSA wage index value by one percentage point or less, the MSA wage index value applies to the redesignated hospitals deemed to be a part of that MSA. The MSA wage index value is determined exclusive of the wage data for the redesignated hospitals.
- If including the wage data for the redesignated hospitals reduces the MSA wage index value by more than one percentage point, the wage index is applied separately to the MSA and to the hospitals deemed to be part of that MSA. In this case, the redesignated hospitals will continue to have their wage index determined on a county-specific basis, as if their county were a separate urban area. However, the wage index for such county will not be less than the Statewide rural wage index.
- Rural areas whose wage index values would be reduced by excluding the data for redesignated hospitals will continue to have their wage index calculated as if no redesignation had occurred. Those rural areas whose wage index values increased as a result of excluding the wage data for the excluded hospitals will continue to have their wage index calculated exclusive of the redesignated hospitals.

The counties subject to the wage index of the MSA to which their hospitals were redesignated (that is, their impact on the MSA wage index would be one percentage point or less) are set forth in table 4c of the addendum to this document. The counties subject to a separate area wage index (that is, their impact on the MSA wage index value would be greater than one percentage point) are set forth in Table 4d. The counties subject to the Statewide rural wage index are set forth in tables 4e of the addendum to this document. A few counties are not included in the tables even though they meet the criteria to permit hospitals to be redesignated because there are no prospective payment hospitals in those counties.

The final wage index values for FY 1991 for each wage area are contained in Tables 4a through 4e. Table 4f lists the wage areas whose wage index changed by more than 8 percent from the previous index to the new index and shows the actual computed wage index as well as the final adjusted wage index.

G. Application of Mid-year Corrections to Wage Index Values (§ 412.63(l))

On occasion, wage data errors have been identified in the middle of the Federal fiscal year. Rather than delaying full implementation of the corrected data until the beginning of the next Federal fiscal year, our practice has been to make mid-year corrections to the wage index value for the area where the error in the reported data occurred so that the hospitals in the affected areas are not unfairly disadvantaged. However, it has been our longstanding policy to make changes to the wage index on a prospective basis only. This policy was specifically discussed in the final rule implementing the prospective payment system, which was published in the **Federal Register** on January 3, 1984 (53 FR 258) and in the September 30, 1984 final rule prospective payment system (53 FR 38496). The only exception we have ever made to this policy was mandated by section 6003(h)(5) of Public Law 101-239, which provided, in certain circumstances, for the retroactive application of wage index corrections. The law specifically states that this provision is to apply only under very limited circumstances and that these retroactive payments would be made only with respect to discharges occurring before October 1, 1990. Given the narrow language of this provision, we believe Congress clearly did not intend that such retroactive adjustments to the wage index should be provided in the future. We will continue our policy of making mid-year corrections to the wage data, where appropriate. Where wage data errors are identified and the fiscal intermediary determines that corrections are appropriate, the wage index value will be recalculated for the affected area only. All revisions to the wage index will be made on a prospective basis effective with discharges occurring after the date the change is made. We believe it is appropriate to make such mid-year corrections to the wage index value for the affected areas so that the hospitals in those areas will not be unfairly disadvantaged. However, the corresponding prospective adjustment to the wage index values for all other wage areas (which reflects the corrected data in the national average hourly wage) will not be made until the beginning of the next fiscal year. Section 1886(d)(3)(E) (as amended by Public Law 101-239) requires that any adjustments to the wage index be made in a budget neutral manner. The wage index budget neutrality adjustment (discussed in section II.A.4.a. of the Addendum to this final rule) will be adjusted at the beginning of the next Federal fiscal year to account for the change in aggregate payments resulting from the mid-year wage index corrections. We will revise § 412.63(k) to specify our policy of making mid-year corrections to the wage index and applying these corrections on a prospective basis only.

Comment: One commenter suggested that the data from the wage index surveys be validated by an independent organization, such as the American Hospital Association. Several commenters requested that we use corrected data. One commenter supported our audit process, but suggested that late changes to the data be used from the date written notification of the change is received by either HCFA or the fiscal intermediary, in the event that the correction is accepted. The commenter also advocated not changing the national average hourly wage for FY 1992 to reflect the accepted data corrections to prevent the wage index value from changing in those areas where no corrections were made. Finally, the commenter opposed any retroactive budget neutrality adjustment we might implement in order to maintain the neutrality of the late changes to the wage index data.

Response: The data used to construct the new wage index have gone through an extensive editing and auditing process. All areas that had a change in their wage index value of greater than 5 percent were identified and divided into two groups: Those areas with an index value that changed by 10 percent or more, and other areas with an index value that changed between 5 percent and 10 percent. For each area with a wage index that increased by 10 percent or more, we looked at the hospitals in that area, and chose hospitals to be audited based on the four criteria that follows. (For those areas where the index changed between 5 percent and 10 percent, the process was the same, but fewer hospitals were chosen.)

- The size of the hospital (larger hospitals were more likely to have their data audited since they have a larger impact on the wage index value).
- The average hourly wage of the hospital relative to the average in the region (those hospitals with large differences were more likely to be audited).
- The hospital's average wage between this survey and the previous survey (with larger differences resulting in a higher likelihood of audit).
- Hospitals that were missing from the 1988 survey.

Data changes that were received by July 12, 1990 and accepted as appropriate, after validation by the intermediary, were used in calculating the final wage index values. Data changes received after that date will be implemented on a prospective basis only (if validated by the intermediary and accepted as appropriate), and the HCFA regional offices will be notified of any resulting changes to an area's wage index value. Anyone who believes that the data for their labor market area are incorrect may request the surveys and check the submitted data themselves. Even though no adjustments may have been made to the wage data for a given MSA between the proposed rule and the final rule, we note that all final wage index values have changed because the national average hourly wage changed as a result of the data corrections.

With respect to mid-year corrections made during FY 1991, we believe that it is necessary both to adjust the national average hourly wage for the FY 1992 wage index and to perform the retroactive budget neutrality adjustment in order to comply with the budget neutrality provisions of the Act. Absent a retroactive budget neutrality adjustment at the beginning of next fiscal year, we believe that we would be precluded from making mid-year corrections to the wage index since they could not be accomplished in a budget neutral fashion as required by law. We must also reflect any changes to the national average hourly wage in order to properly perform the wage index's function: reflecting the relative labor cost experiences across different areas of the country.

H. Future Updates to the Hospital Wage Index

Section 1886(d)(3)(E) of the Act, as amended by Public Law 101-239, requires the Secretary to update the wage index again in FY 1993 and at least annually thereafter. We proposed to continue collecting data on all categories of wage costs included in the FY 1991 wage index in these future surveys and to continue collecting data on contract labor as well. As noted above under section IV.C, we believe more detailed instructions will eliminate the inconsistencies encountered during the 1988 survey. Also, as noted in section IV.C, we intend to further evaluate the issue of collecting occupation-specific data, and will consider including this factor in future wage indexes.

In response to the majority of public comments to the May 8, 1989 proposed rule that supported including the wage survey in the hospital cost report, we also proposed to incorporate the wage survey form in the Medicare cost report (HCFA-2552) effective with cost reporting periods beginning on or after October 1, 1989. The wage data will be disclosed as a part of the cost report under 42 CFR 401.135(c). Public disclosure was opposed by the majority of commenters who were concerned about occupational specific data. However, we did not propose to include occupational data at the present time.

Comment: Several commenters suggested that we move quickly to annual updates of the wage index, in order to protect hospitals from abrupt changes in their prospective payment system payments. Some commenters suggested that we move to annual updates starting with FY 1992. One organization stated that annual updates are very important because of the increase in the minimum wage.

Response: We are currently developing a data collection system which will enable us to make annual updates of the wage index using the hospital cost report as the vehicle for collecting the data. We believe that the cost report, rather than a special wage survey form, is the appropriate means for collecting the wage data on an ongoing basis. The earliest we can use the cost report form for this purpose to collect wage data is for cost reporting periods beginning on or after October 1, 1989. Once this mechanism is in place, we will have the capability to update the wage index on an annual basis, as required by section 1886(d)(3)(E) of the Act, beginning in FY 1994. Unfortunately, we do not expect that audited and/or verified cost report wage data will be available for updating the wage index prior to that time.

V. Rebasing and Revising of the Hospital Market Basket

A. Background

Effective for cost reporting periods beginning on or after July 1, 1979, we developed and adopted a hospital input price index (that is, the hospital "market basket") operating costs. Although "market basket" technically describes the mix of goods and services used to produce hospital care, this term is also commonly used to denote the input price index derived in part from that market basket. Accordingly, the term "market basket" used in this document refers to the hospital input price index.

The percentage change in the market basket reflects the average change in the price of goods and services purchased by hospitals to furnish inpatient care. We first used the market basket to adjust hospital cost limits by an amount that reflected the average increase in the prices of the goods and services used to furnish inpatient care. This approach linked the increase in the cost limits to the efficient utilization of resources.

With the inception of the prospective payment system on October 1, 1983, we continued to use the hospital market basket to update each hospital's 1981

inpatient operating cost per discharge used in establishing the FY 1984 standardized payment amounts. In addition, the projected change in the hospital market basket has been the integral component of the update factor by which the prospective payment rates are updated every year. Under current law, we are updating the prospective payment rates for FY 1991 by the projected increase in the hospital market basket. An explanation of the hospital market basket used to develop the prospective payment rates was published in the **Federal Register** on September 3, 1986 (51 FR 31461). For additional background information on general development of hospital input price indexes, we refer the reader to the article by Freeland, Anderson, and Schendler, "National Hospital Input Price Index," Health Care Financing Review, Summer 1979, pp. 37–61.

The hospital market basket is a fixed-weight price index constructed in two steps. First, a base period is selected and the proportion of total expenditures accounted for by designated spending categories is calculated. These proportions are called cost or expenditure weights. In the second step, a rate of price increase for each spending category is multiplied by the cost weight for the category. The sum of these products for all cost categories yields the percentage change in the market basket, an estimate of price change for a fixed quantity of purchased goods and services.

The market basket is described as a fixed-weight index because it answers the question of how much more or less it would cost, at a later time, to purchase the same mix of goods and services that was purchased in the base period. The effects on total expenditures resulting from changes in the quantity or mix of goods and services purchased subsequent to the base period are not considered. For example, shifts in the furnishing of a certain type of inpatient care to an outpatient setting might affect the volume of inpatient goods and services purchased by the hospital but would not be factored into the percentage change in the hospital market basket.

We believe that it is desirable to rebase the market basket periodically so the cost weights reflect changes in the mix of goods and services that hospitals purchase (hospital inputs) in furnishing inpatient care. We last rebased the hospital market basket cost weights effective for FY 1987. The market basket used through FY 1990 reflected base-year data from 1982 in the construction of the cost weights.

In its April 1, 1985 report to the Secretary, which is appendix C of the June 10, 1985 proposed rule (50 FR 24446), ProPAC suggested that the market basket cost weights should be recalculated or "rebased" at least every 5 years or more frequently if significant changes in the weights occur. Most of the data used to rebase the market basket are from 1987.

B. Rebasing and Revising the Hospital Market Basket

In this rule we are using a revised market basket to set the FY 1991 update factor for the prospective payment rates. The new market basket is revised as follows:

- We are rebasing to reflect 1987, rather than 1982, cost data.
- We are modifying certain variables used as the price proxies for some of the cost categories.

In developing the revised market basket, we reviewed hospital expenditure data for the market basket cost categories. Preliminary data on hospital expenditures for six major expense categories (wages and salaries, employee benefits, professional fees, depreciation, interest, and a residual "all other" category) were collected using 1987 data on Medicare participating hospitals from the American Hospital Association's (AHA) 1988 Annual Survey (referred to hereafter as the 1987 AHA annual survey). The AHA data include capital-related expenditures. Also, only prospective payment hospitals were included in these calculations. No special adjustments were made for hospitals with AHA-imputed values. We then determined, for each category, the proportion the category represents of total cost (excluding capital-related costs). These proportions represent the skeletal revised market basket weights. This approach is consistent with the way those values were calculated using 1982 data. Utilities and contract nursing weights were unavailable from the 1987 AHA Annual Survey. Instead, these weights were estimated from trends in earlier years of AHA Annual Survey data and from trends in other data sources, such as the AHA Hospital Administrative Services (HAS) survey. The HAS survey data were also used to provide weights for food and pharmaceutical products. The HAS survey reports medians rather than means.

We are replacing the base weight for professional liability that was used in the May 9, 1990 proposed rule. The weight for professional liability stated in the proposed rule was derived from the HAS Monitrend survey. This weight is being replaced by a 1987 Medicare cost report estimate of the mean share of hospital expenditures that went to the cost of professional liability insurance. This estimate was based on expenditures for total hospital costs, not just Medicare's share of costs. An advantage of using the Medicare cost report is that it presents mean data rather than median. It is noteworthy that for prospective payment system hospitals there is no difference between the 1987 Monitrend cost weight and the Medicare cost report weight. For excluded hospitals, the Medicare cost report weight is significantly less than the Monitrend weight. However, we believe that the Medicare weight is a more comprehensive estimate because it includes all excluded hospitals. The Monitrend estimate combined median data for some excluded facilities with industry data that were not representative of all excluded hospitals.

Weights for the remaining subcategories within the "all other" category, and for subcategories within utilities were derived from the U.S. Department of Commerce, Bureau of Economic Analysis data on the hospital industry. This data base, which is updated at 5-year intervals, was most recently described in the report, "The Detailed Input-Output Structure of the U.S. Economy, 1977." It contains a detailed source of information on hospital input expenditures. The Bureau of Economic Analysis data were aged to 1987 using appropriate price changes and calibrated for consistency with the 1987 market basket.

Relative importance factors for the revised base-year were then calculated for various expenditure categories. This work resulted in the identification of 28 separate cost categories in the rebased hospital market basket. Detailed descriptions of each category and respective price proxy are provided in appendix B of this final rule. The cost categories and weights for the rebased hospital market basket are summarized in Table 1 below.

TABLE 1.—REBASED 1987 HOSPITAL MARKET BASKET WEIGHTS

Expense categories	Rebased 1987 hospital market basket weights[1]
1. Wages and Salaries [2 3]	52.2
2. Employee Benefits [2 3]	9.5
3. Other Professional Fees	1.7
4. Energy and Utilities	2.4
A. Fuel, Oil, Coal and Other Fuel	0.6
B. Electricity	1.1
C. Natural Gas	0.3

TABLE 1.—REBASED 1987 HOSPITAL MARKET BASKET WEIGHTS—Continued

Expense categories	Rebased 1987 hospital market basket weights[1]
D. Motor Gasoline	0.2
E. Water and Sewerage	(4)
5. Professional Liability Insurance	1.4
6. All Other	32.8
A. All Other Products:	
(1) Pharmaceuticals	3.9
(2) Food:	
(a) Direct Purchase	2.1
(b) Contract Service	1.2
(3) Chemicals	3.1
(4) Medical Instruments	2.7
(5) Photo Supplies	2.6
(6) Rubber and Plastics	2.3
(7) Paper Products	1.4
(8) Apparel	1.1
(9) Mach. and Equip	0.5
(10) Miscellaneous Products	0.8
Subtotal	21.8
B. All Other Services:	
(1) Business Services	3.8
(2) Computer Services	2.0
(3) Transportation and Shipping	1.2
(4) Telephone	1.0
(5) Blood Services	0.6
(6) Postage	0.4
(7) All Other Services: Labor Intensive	1.2
(8) All Other Services: Nonlabor Intensive	0.8
Subtotal	11.0

[1] The 1982 regulation hospital market basket has a composite set of weights for prospective payment hospitals and hospitals excluded from the prospective payment system. The 1987 prospective payment system market basket has weights for prospective payment hospitals only. A separate market basket will be used for hospitals excluded from the prospective payment system.

[2] In 1987, expenses for contract nursing, a noncompensation expense in the AHA annual survey, were allocated to wages and salaries and to employee benefits. In 1982, expenses for contract nursing were included in "Other Professional Fees" in the market basket.

[3] In both market baskets (1982 and 1987), wages and salaries are composed of nine subcategories that correspond with employment cost index categories for the nine occupational groups. In addition, in 1987 employee benefits were grouped into occupational categories.

[4] Rounds to less than 0.1.

NOTE: Due to rounding, weights may not sum to 100 percent.

In the September 3, 1986 final rule (at 51 FR 31463), for purposes of determining the labor-related portion of the standardized amounts, we added together the percentages of the labor-related items (that is, wages and salaries, employee benefits, professional fees, business services, computer and data processing, blood services, postage, and all other labor-intensive services) in the hospital market basket. This summation resulted in a labor-related portion of the hospital market basket of 74.39 percent and nonlabor-related portion of 25.61 percent.

Sections 1886 (d)(2)(H) and (d)(3)(E) of the Act require that, in making payments under the prospective payment system, the Secretary adjust the proportion (as estimated by the Secretary from time to time) of payments that are wage-related. Since October 1, 1986, we have considered 74.39 percent of costs to be labor-related for purposes of the prospective payment system.

In connection with the rebasing of the hospital market basket, we have, under the authority of the applicable section of the statute cited above, re-estimated the labor-related share of the standardized amounts. Based on the relative weights described in Table 1 of section V.B. of this final rule, the labor-related portion that is subject to hospital wage index adjustments (based on wages and salaries, employee benefits, professional fees, business services, computer and data processing, blood services, postage, and all other labor-intensive services) is 71.40 percent and the nonlabor-related portion is 28.60 percent. To implement this change, effective with discharges occurring on or after October 1, 1990, we recomputed the labor-related and nonlabor-related shares of each hospital's base year cost used to establish the prospective payment rates.

The amounts in Table 1 of section IV of the addendum to this final rule have been recomputed to reflect the revised labor-related and nonlabor-related portions. It should be noted that, because of the revision of the labor and nonlabor portions, the labor portions of the rates published in Table 1 of the addendum to this final rule have decreased from those currently in effect while the nonlabor portions have increased.

Comment: One commenter noted that the proposed market basket weights were derived from data from several different sources and that some sources used data from years prior to 1987 that were aged to 1987. The commenter suggested that data from the 1987 Medicare cost reports should be used for all cost weights to have consistent data from one source. Another commenter expressed concern that the HAS median data might penalize large hospitals.

Response: As we noted in the proposed rule, the primary source of data for the main cost weights in the proposed market basket was the American Hospital Association 1988 annual survey which collected fiscal year 1987 data. Other data sources were used for smaller cost categories because these categories could not be obtained from the AHA file. Each of these additional data sources was selected because it was the best available source for that cost category. The market basket is constructed as an index of price change for the entire hospital across all payers. The primary purpose of Medicare cost reports is to assure the correct payment of Medicare's share of total hospital expenses. Our internal analysis of cost report information on hospital totals, as opposed to the Medicare share, is that the total hospital information reported on the Medicare cost report cannot provide the detailed cost weight breakdown needed for the market basket. We would be able to break total costs only into total compensation, malpractice, capital, and all others using the medicare cost reports. This would not be a sufficient number of cost categories to fully represent the wide variety of input costs hospitals incur in producing care. However, we are using Medicare cost report data to obtain the malpractice cost weight in the final market basket because it is the most accurate source of that data. We believe the cost weights used in the market basket are the most accurate and complete measurement of the prospective payment system and excluded hospital cost shares that it is possible to obtain from available data sources.

Comment: One commenter noted that the proposal splits wages and fringe benefits into separate cost categories. The commenter submitted data showing that the wage to fringe benefit ratio varies across occupational categories, and that the overall ratio of wages to fringe benefits in the submitted data differs from the ratio of wages to fringes in the proposed market basket. The commenter noted that the proposed market basket makes no provision for fringe benefits that vary by occupation and that it appears to understate the share of costs assigned to fringe benefits. The commenter suggested that the ECI for total compensation might be a better employee compensation proxy when applied to a combined cost weight for employee wages and salaries plus fringes.

Response: We share the commenter's concern that wages and fringe benefits may be growing at different rates. In fact, this is one of the primary reasons that a separate cost weight has been created for fringe benefits in the market basket. With this construction, if wages or fringes are growing at different rates, the separate proxy variables for wages and fringe benefits will pick up this difference over time and increase the relative importance of whichever category is growing faster. (The relative importance is the base year weight brought up to current levels or forecasted forward based on the rate of

growth of the proxy price variable.) The data submitted by the commenter shows different ratios of wages to fringes by occupation. However, it appears to be based on the total private sector, not the hospital industry.

In creating the cost weights for wages and fringe benefits, we totaled the appropriate fields in the AHA annual survey to arrive at the weights. These data summarize each hospital's experience over a total year and we have no reason to believe that the results are not reliable. We are not persuaded that fringe benefits are understated as a share of total costs. As noted, we created separate cost weights for wages and fringe benefits in order to identify and understand the separate contributions of wages and fringe benefits to growth in labor costs. Adopting a total compensation index covering both wages and fringes would limit our understanding, and the industry's, of the contribution of each factor to changes in the market basket forecasts. It would also be counter to our philosophy of providing as much disaggregation as feasible in market basket cost weights to make it clear that we are measuring all costs that hospitals must pay to produce health care.

Comment: Several commenters noted that the labor related portion of the market basket included several cost categories in addition to wages and fringe benefits. They suggest that the labor related portion be redefined more narrowly to include only wages and fringe benefits. One commenter noted the absence of an adjustment to the prospective payment rate for geographic differences in nonlabor prices and recommended that a broader definition of labor be used to compensate for the lack of a nonlabor price adjustment.

Response: The labor related portion of the market basket has been defined the same way since the program began. Hospital labor-related costs include wages and salaries, employee benefits, professional fees, business services, and the other categories, as described in the proposed rule. Each of these categories is classified as labor-related because it consists of direct payments to labor inputs by the hospital or hospital payments for services that are very labor intensive. A narrower definition of labor related costs would mean that a smaller share of the adjusted standardized amounts would be adjusted by the area wage index. This would financially benefit hospitals whose wage indexes were below average and financially harm hospitals with above average wage indexes. Conversely, a broader definition of labor-related costs would financially benefit hospitals with above average wage indexes. We believe we have correctly identified the labor-related portion of market basket costs and are not persuaded a redefinition is appropriate. Further, we believe a significant redistribution of payments among hospitals, such as would occur if we adopted one of these suggestions, would be inappropriate.

C. Selection of Price Proxies

After the 1987 cost weights for the rebased hospital market basket were computed, it was necessary to select appropriate wage and price proxies to monitor the rate of increase for each expenditure category. Most of the indicators are based on Bureau of Labor Statistics (BLS) data and are grouped into one of the following four BLS categories:

- Producer Price Indexes—Producer Price Indexes (PPIs) are used to measure price changes for goods sold in other than retail markets. For example, the PPI for ethical drugs, rather than the Consumer Price Index (CPI) for prescription drugs, was used. They are preferable proxies for goods that hospitals purchase as inputs as part of the process in producing their outputs. These indexes, which are fixed-weight, measure price change at the producer or intermediate stage of production.
- Consumer Price Indexes—Consumer Price Indexes (CPIs) measure change in the prices of final goods and services bought by the typical consumer. Similar to the PPIs, they are fixed-weight. Because they do not represent the price faced by the producer, the consumer price indexes were used if no appropriate PPI was available, or if the expenditure was more similar to that of retail consumers in general rather than a purchase at the wholesale level. For example, the CPI for food purchased away from home was used to proxy contracted food services.
- Employment Cost Indexes—Employment Cost Indexes (ECIs) measure the rate of change in employee wage rates and employer costs for employee benefits per hour worked. These indexes are fixed-weight indexes and strictly measure the change in wage rates and employee benefits per hour. They are not affected by shifts in employment mix.
- Average Hourly Earnings Series—Average Hourly Earnings (AHEs) are used to weight the hourly earnings for various occupations within a given industry and, therefore, reflect a weighted employment mix for a particular industry. The AHE series is calculated by dividing gross payrolls by total hours and measures actual earnings rather than pure wage rates. It is a current-weight series rather than a fixed-weight index and thus reflects shifts in employment mix.

Our price proxies for the rebased prospective payment hospital market basket are summarized in appendix B of this final rule. However, because we proposed to revise price proxies substantially for compensation (wages and salaries plus employee benefits), we provided a separate discussion of the new price proxies for the compensation portion of the rebased market basket. For purposes of this discussion we refer to the revised structure (weights and price proxies) of the compensation component as the "HCFA Blended Compensation Index."

D. The HCFA Blended Compensation Index

Compensation includes the two largest categories of the rebased hospital market basket. Wages and salaries account for 52.2 percent and employee benefits account for 9.5 percent of the total weight. Through FY 1990, the input price increases for the wages and salaries component are a blend of average hourly earnings for the private (includes workers from all categories of hospitals except State, local, and Federal Government) hospital industry (Standard Industrial Classification Code 806) and economy-wide employment cost indexes (ECI) for nine occupational groups. Fifty percent of the weight for professional and technical workers has the average hourly earnings for hospital employees price proxy. The remaining fifty percent of the weight for professional and technical workers has the price proxy of ECI for Professional and Technical workers in the private sector of the economy. The remaining eight occupational groups have ECIs for the private sector for the respective categories.

In its March 1, 1990 report, ProPAC recommended that the wage and benefit component of the market basket be measured using a blend of 50 percent of the Employment Cost Index compensation series for hospital workers and 50 percent of nine nonhospital ECI compensation series reflecting the types of employees hospitals hire. The Commission also recommended that contract labor expenses be incorporated into the new compensation component in the market basket.

We concurred with ProPAC's recommendation to include contract labor in the compensation component of the market basket. Further, we agreed with ProPAC that the ECI series for hospital workers should replace the currently used BLS Average Hourly Earnings for private hospital workers. We are retaining the current weighting methodology (50 percent of the professional and technical weight has a hospital industry wage variable), but are substituting the ECI for Wages and Salaries for civilian hospital workers for the average hourly earnings of private hospital workers. The civilian hospital

workers category includes workers from all categories of hospitals except Federal hospitals. The ECI offers a purer measure of wage changes than the average hourly earnings series. The ECI is not affected by changes in the occupational mix within the hospital industry. In addition, the ECI for hospital workers includes public (except Federal) and private sector employees. The AHE series includes only private employees. The ECI for civilian hospital workers began in the second quarter of 1986. We believe that the ECI represents a substantial conceptual improvement in measurement over the AHE variable.

The price proxy used in the hospital market basket through FY 1990 for employee benefits was the sum of employer contributions for social insurance and other labor income per worker in the nonagricultural economy. This measure was calculated from the Department of Commerce and Department of Labor data sources. This price proxy was an economy-wide measure of the growth in employee benefits per worker.

In this rule, we are revising the variable used for the employee benefits price proxy to the ECI for employee benefits. Indexes are available for the hospital industry and for the nine occupational groups used for the wages and salaries weighting in the hospital market basket. We are weighting the ECIs for employee benefits the same as the ECIs for wages and salaries.

It is generally accepted that prices for most nonlabor hospital inputs are nondiscretionary or beyond the control of the hospital industry. To monitor price changes in these expenditure categories, external (economy-wide) prices are used. However, hospital compensation (wages and salaries plus employee benefits) should not be considered totally beyond industry control. Hospital compensation levels and percent increases could potentially be influenced by market imperfections associated with cost-containment efforts, unionization of employees, cost-based reimbursement or monopsonistic buying practices. These types of potential market imperfections can result in underpayment or overpayment of hospital industry wages relative to other industries.

The HCFA Blended Compensation Index groups hospital occupations into nine broad categories. For eight of these occupational groups we believe that hospitals compete for labor generally with employers outside the health sector. Accordingly, use of ECIs as external price proxies for each occupation seems most appropriate. In the case of compensation for nurses, especially registered nurses, as well as for certain other health care technicians and professionals, the hospital labor market may predominate and this should be reflected in the use of an internal compensation proxy. However, hospitals also compete with other industries to obtain certain skilled professional and technical staff (for example, computer programmers). Therefore, for professional and technical workers, we believe a price proxy that reflects an equal blend of internal and external compensation variables is appropriate. The proxy for the wages component of the prospective payment hospital market basket reflects internal and external measures of price changes set forth in Table 2, as follows:

TABLE 2.—HCFA BLENDED WAGES AND SALARIES

Wages and Salaries Component of the 1987 Hospital Market Basket	Wages and Salaries Percentage [1]	Price Proxy
1. Professional and Technical	62.0	50/50 blend of ECI for Hospital Workers and ECI for Wages and Salaries of Professional Specialty and Technical Workers
2. Managers and Administrators	9.7	ECI for Wages and Salaries for Executive, Administrative and Managerial Workers
3. Sales	0.4	ECI for Wages and Salaries for Sales Workers
4. Clerical Workers	12.9	ECI for Wages and Salaries for Administrative Support Including Clerical Workers
5. Craft and Kindred	1.9	ECI for Wages and Salaries for Precision Production, Craft and Repair Workers
6. Operatives Except Transport	0.6	ECI for Wages and Salaries for Machine Operators, Assemblers and Inspectors
7. Transport Equipment Operatives	0.1	ECI for Wages and Salaries for Transportation and Material Moving Workers
8. Nonfarm Laborers	0.1	ECI for Wages and Salaries for Handlers, Equipment Cleaners, Helpers and Laborers
9. Service Workers	12.2	ECI for Wages and Salaries for Service Occupations
Total Wages and Salaries [2]	100.0	Total Weight for Wages and Salaries is 52.2

[1] Wages and salaries percentages were calculated using hospital industry data from the 1987 current population survey.
[2] Due to rounding, weights may not sum to 100 percent.

The HCFA Blended Employee Benefits Index uses the same percent distribution as the wages and salaries distribution in Table 2. The ECIs for employee benefit proxies are the analog ECI's for wages and salaries for each of the groups in Table 2. The total weight for employee benefits is 9.5 percent.

The Blended Wages and Salaries Index is combined with the Blended Employee Benefits Index to form the HCFA Blended Compensation Index.

We believe that the HCFA Blended Compensation Index provides an accurate and equitable basis for monitoring increases in the wages and employee benefits portions of the hospital market basket and that it responds to ProPAC's concern that the input price index should reflect labor market forces that are both internal and external to the hospital industry.

Comment: Several commenters noted that the proposed market basket uses a 50/50 blend of internal and external employee compensation (wages and fringe benefits) price proxies applied only to the professional and technical portion of employee compensation. They questioned why this 50/50 internal/external blend is not extended to other occupational categories.

Response: There is a continuing debate about whether internal employee compensation proxies (measures of employee compensation growth from the hospital industry) or external employee compensation proxies (measures of employee compensation growth in comparable occupational categories outside hospitals) are more appropriate proxies for the growth in employee compensation in the market basket. Using 100 percent internal (hospital industry) measures of employee compensation growth would effectively pass through, as reimbursable costs, the higher rates of employee compensation growth experienced by hospitals as compared to the rest of the economy. Using 100 percent external (economy-wide) measures of employee compensation growth would effectively hold hospitals to the lower levels of

employee compensation growth in the larger economy adjusted for their employment mix. The prospective payment system eliminated full cost reimbursement of hospital operating costs and substituted financial incentives for prudent purchasing of hospital inputs. The prospective payment system market basket measures the growth in hospital prices for production inputs. It is structured to encourage cost effective spending for labor by using economy-wide employee compensation proxy variables in those occupations that are generally employed both in and out of hospitals. This includes managers and administrators, sales workers, clerical workers, etc. Hospitals receive full credit for increases in employee compensation in these occupations at the rate this growth occurs in the general economy. We believe this is a reasonable employee, compensation growth allowance for these occupations in the aggregate. However, the prospective payment system market basket also recognizes that there are specialized occupations, such as registered nurses, where shortages can cause employee compensation to grow faster in the hospital sector than in the general economy. These occupations are primarily in the professional and technical component of hospital employee compensation. This component is the largest occupational category, making up 62 percent of the total hospital employee compensation bill. In order to compensate hospitals for increases in employee compensation among professional and technical staff that may be due to shortages or other circumstances outside the hospital's management control, we apply a hospital-industry-specific employee compensation proxy to half of the professional and technical component. This employee compensation price proxy structure passes through one half of any increases in hospital-industry-specific employee compensation for professional and technical employees in excess of general employee compensation inflation for that group. It is constructed this way in order to recognize that hospitals may experience above average employee compensation increases for registered nurses or other specialized professional and technical staff, while retaining incentives for the efficient use of labor.

Comment: The 50 percent internal price proxy used for the professional and technical employee compensation component of the market basket is the Employment Cost Index (ECI) for all hospital employees. Several commenters inquired whether this proxy is appropriate, since it measures employee compensation growth for a broader group of hospital employees than just professional and technical employees.

Response: There is no ECI for employee compensation of professional and technical hospital employees. The best available hospital-industry-specific employee compensation proxy is the ECI for all hospital employees, which we used. As we noted in the proposed rule (at 55 FR 19448), the 1982 base market basket used the Average Hourly Earning (AHE) of hospital workers as the hospital-industry-specific employee wages and salaries. This AHE could be influenced, in addition to changes in wage rates, by changes in the employment mix of hospitals. The ECI used as an internal employee compensation proxy in the 1987-based market basket is a superior measure of "pure" price change for hospital employee compensation. Most public comments favored the change from the AHE proxy to the ECI proxy on the grounds that it was a technically superior measure of hospital employee compensation growth. For employee benefits, the 1982-based market basket used as a proxy an economy-wide measure on changes in employee benefits per worker. The 1987-based market basket uses an occupation specific blend of Employment Cost Indexes for employee benefits weighted by the hospital employment mix.

Comment: One commenter stated that HCFA has provided no analysis to suggest that a hospital-industry-specific or internal employee compensation proxy that applies to approximately 30 percent of hospital employee compensation is appropriate, or that a 100 percent hospital-industry-specific employee compensation proxy is inappropriate. The commenter stated more broadly that HCFA has not demonstrated that changes in labor prices are within hospitals' control.

Response: Prior to the inception of the prospective payment system, hospitals were paid in full for their reasonable costs of providing services. This meant that hospitals were paid in full for increases in the employee compensation of their personnel. Making the employee compensation proxy variables 100 percent internal or hospital-industry-specific would be equivalent to passing through for full reimbursement all hospital employee compensation increases in excess of economy-wide employee compensation growth by occupational category. Prior to the prospective payment system, many observers and analysts felt that this guarantee of full cost reimbursement was an important factor in the growth of hospital costs at rates well above inflation in the rest of the economy. The prospective payment system was instituted to change the full cost reimbursement formula to one that stimulated efficiency in the production of hospital care, including efficiency in the production of hospital care, including the prudent purchasing of labor inputs. It is explicit in the philosophy behind the prospective payment system that hospital managers have considerable control over growth of costs. Experience to date under the prospective payment system shows clearly that hospital managers do in fact have considerable ability to control the growth of production costs. Our decision to weight over 30 percent of hospital labor costs with internal rates of increase was made in recognition that hospitals can experience employee compensation increases that are beyond their ability to control, such as those stemming from shortages of registered nurses or other types of skilled and specialized personnel.

Comment: Several commenters made the point that applying the proxy weights to the occupational cost shares as proposed results in "effective" weights that are less than or more than the occupational cost weights. They argued that market basket weights are biased unless "effective" cost weights are proportional to actual cost weights, that is, 62 percent professional and technical, and 9.7 percent managers and administrators, etc.

Response: A fixed weight (Laspeyres) price index used for prospective payment is constructed in several steps. First, base weights must be established. This step establishes the cost weights (cost shares) for the average prospective payment system or excluded hospital in the base year, in this case 1987. As noted in the proposed rule, employee wages and salaries for prospective payment system hospitals are 52.2 percent of hospital costs and fringe benefits are 9.5 percent, etc. In order to further break down employee wage and salary costs, the largest component of hospital costs, we calculated the share of wages and salaries in various occupational categories within the hospital. We calculated that 62 percent of hospital wages and salaries go to professional and technical employees, 9.7 percent to hospital managers and administrators, etc. The second step in constructing a fixed weight index is selecting price proxies that are appropriate for tracking increases in each cost category. There are three

important considerations in selecting price proxy variables. The most important is that the wage or price proxy match, as closely as possible, what is included in the cost weight. This insures that we measure changes in those costs due to price change accurately over time. A second consideration relates to the question of internal (hospital-industry-specific) and external (economy-wide) proxies. As discussed at length above, the prospective payment system was designed to create financial incentives for hospitals to produce care efficiently. In general, employee compensation proxies that are economy-wide hold hospitals to employee compensation increases occurring in the rest of the economy (adjusted for occupational mix) and hospital-industry-specific employee compensation proxies pass through the actual employee compensation inflation occurring in hospitals. The third consideration in selecting an employee compensation proxy is whether it can be accurately forecasted to produce a reliable forecast of future increases in the cost category. This means having a valid historical data series. Thus, price proxies are selected based on both technical and policy considerations. Commenters noted that it is possible to arrange occupational cost weights and employee compensation price proxy shares in such a way that multiplying cost weights and price proxy shares creates "effective" weights that are proportional to actual cost weights. However, this apparent mathematical congruence is achieved by making a large share of employee wage and salary proxies hospital-industry-specific, including the employee wage price proxies for many occupational categories which are clearly not hospital-industry-specific. Proportional or symmetrical cost/proxy weights may be appealing in an accounting sense, but in one comment this apparent congruity is achieved by making every occupational employee compensation proxy 50 percent internal to the hospital industry. We do not believe this is consistent with the prospective payment system philosophy of providing incentives for cost control. In addition, mathematical proportionality does not justify the application of hospital-industry-specific price proxies to occupations that are essentially economy-wide.

Comment: One commenter suggested that using a 50/50 internal/external blend for professional and technical hospital employees implies that 50 percent of employees are in special job titles and health-related occupations specific to the health care industry. They presented data suggesting that the blended compensation index for professional and technical employees should be 91 percent internal or hospital-industry-specific and 9 percent external or economy-wide. Other commenters, while less specific, argued that a larger share than 50 percent of professional and technical employees should have employee compensation proxies internal to the hospital.

Response: As we noted in the proposed rule and in response to comments above, we use a 50 percent internal employee compensation proxy for professional and technical employees recognizing that labor shortages in some health-related occupations can force up employee compensation for reasons beyond the ability of hospital management to control. There is no assumption, we suggested in the comment, that 50 percent of professional and technical employees are in health-related occupations. For the reasons stated in the proposal and reiterated above, we believe that weighting the price proxies for professional and technical employees at 50 percent internal or hospital-specific provides an adequate allowance for compensation increases in specialized occupational categories above economy-wide levels.

E. Separate Market Basket for Hospitals and Hospital Units Excluded From the Prospective Payment System

In its March 1, 1990 report, ProPAC recommended that we establish a separate market basket for hospitals and hospital units excluded from the prospective payment system. We agree with this recommendation. Therefore, we propose to implement a separate market basket for excluded hospitals an units. Excluded hospitals tend to have different case mixes, practice patterns, and composition of inputs from prospective payment system hospitals. The fact that these hospitals are not included under the prospective payment system in part reflects these differences.

HCFA, ProPAC, and industry studies have documented the significantly different weights for excluded hospitals and prospective payment hospitals. Table 3 of section V.E. of this final rule shows the cost categories and weights for the 1987-based market basket for excluded hospitals. Wages and salaries are 61.3 percent of total operating costs for excluded hospitals compared to 52.2 percent for prospective payment hospitals. Employee benefits are 13.0 percent for excluded hospitals compared to 9.5 percent for prospective payment hospitals. Compensation costs (wages and salaries plus employee benefits) are 74.3 percent of costs compared to 61.7 percent for prospective payment hospitals. Noncompensation costs are 25.7 percent of excluded hospitals and 38.3 percent of costs for prospective payment hospitals. Energy and utility costs are a slightly higher percent of excluded hospital costs reflecting the higher proportion of room costs relative to ancillary services for excluded hospitals. On the other hand, pharmaceutical costs are a substantially lower proportion of costs for excluded hospitals. The weights for the excluded hospital market basket were derived using essentially the same data sources and methods as for the prospective payment market basket (see appendix B to this final rule).

Differences in weights between the excluded hospital and prospective payment hospital market baskets do not necessarily lead to significant differences in the rate of price growth for the two market baskets. If all individual wages and prices move at the same annual rate, both market baskets will have the same price growth since weights are irrelevant in this special case. Also, offsetting price increases for various cost components can result in the price growth being the same.

Comment: One commenter noted that we created a separate market basket for hospitals that are excluded from the prospective payment system. The commenter suggested that it might be appropriate to create separate market baskets for each type of excluded hospital.

Response: For some time, we have been studying the issue of whether there should be a separate market basket for excluded hospitals, or a separate market basket for each type of excluded hospital. Even though it was clear that the cost structures were very different for the prospective payment system and excluded hospitals, our analyses were not showing large or consistent differences between the forecasted price increase for the prospective payment system and excluded facilities. As part of the rebasing process, did simulated forecasts for psychiatric, rehabilitation, long-term, and children's hospitals and compared the results. We found little difference between the historical and forecasted price increases for each type of excluded facility and also that there is not a significant difference in historical and forecasted price changes between prospective payment system hospitals and excluded hospitals. However, as noted in the proposed rule, excluded hospitals have much higher labor shares than prospective payment

system hospitals. The large difference in cost weights and the slight, but consistent, difference in historical and forecasted price indexes convinces us that a separate excluded hospital market basket would be appropriate. However, at this time there is no evidence supporting the need for a separate market basket for each type of excluded hospital.

Comment: One commenter felt that HCFA should consider adding a one-time adjustment add-on to the full current update factor to compensate for the cumulative error in the target amounts for hospitals excluded from the prospective payment system that resulted from using the prospective payment hospitals' market basket up through FY 1990.

Response: As we noted in the proposed rule, when the market basket for hospitals excluded from the prospective payment system and the market basket for prospective payment hospitals were compared on a historical basis from FY 1977 through FY 1989, the average difference between the two scenarios was only 0.1. This was well below the tolerance range of 0.25 percent suggested by ProPAC for the implementation of a forecast error correction factor. In 9 of the 13 years examined, the difference was 0.1 or less. In addition, since FY 1984, the difference has consistently been 0.1 or less and, in FY 1989, the prospective payment hospitals' market basket was 0.2 higher than the excluded hospitals' market basket. Therefore, we believe that there has not been a significant enough difference between the two market baskets to warrant a one-time adjustment add-on.

In Table 3, which follows, we set forth the 1987 market basket weights for excluded hospitals.

TABLE 3.—1987 EXCLUDED HOSPITAL MARKET BASKET WEIGHTS [1]

Category	1987 excluded hospital market basket weights [2]
1. Wages and salaries	61.3
2. Employee benefits	13.0
3. Professional fees	1.4
4. Energy and utilities	2.8
A. Fuel oil, coal, etc	0.7
B. Electricity	1.3
C. Natural gas	0.4
D. Motor gasoline	0.3
E. Water and sewerage	([3])
5. Prof. liability ins	1.0
6. All other	20.6
A. All other products:	
(1) Pharmaceuticals	1.8

TABLE 3.—1987 EXCLUDED HOSPITAL MARKET BASKET WEIGHTS [1]—Continued

Category	1987 excluded hospital market basket weights [2]
(2) Food:	
(a) Direct purchase	2.5
(b) Contract service	0.7
(3) Chemicals	1.9
(4) Medical instruments	1.6
(5) Photo. supplies	1.6
(6) Rubber and plastics	1.4
(7) Paper products	0.9
(8) Apparel	0.7
(9) Mach. and equip	0.3
(10) Miscellaneous products	0.5
Subtotal	13.7
B. All other services:	
(1) Business services	2.4
(2) Computer services	1.2
(3) Trans. and shipping	0.8
(4) Telephone	0.6
(5) Blood services	0.4
(6) Postage	0.2
(7) All other labor intensive	0.8
(8) All other nonlabor int	0.5
Subtotal	6.9

[1] The wage and price proxies are the same for the excluded hospital and prospective payment hospital market baskets.

[2] The 1987 excluded hospital market basket has a composite set of weights for Medicare participating psychiatric, long term care, rehabilitation, and children's hospitals.

[3] Rounds to less than 0.1.

Note: Due to rounding, weights may not sum to 100 percent.

VI. Other Decisions and Changes to the Regulations

A. Elimination of the Regional Floor (§ 412.70)

Section 4002(d) of Public Law 100–203 amended section 1886(d)(1)(A)(iii) of the Act to establish a "regional floor" for the prospective payment rate applicable to a hospital effective for discharges occurring on or after April 1, 1988 and before October 1, 1990. In accordance with this section, hospital payments have been based on the greater of the national average standardized amount or the sum of 85 percent of the national average standardized amount and 15 percent of the average standardized amount for the Census region in which they are located. Because the statutory authority for use of the regional floor expires on October 1, 1990, we proposed to discontinue its use effective with discharges occurring on or after October 1, 1990.

Comment: Several commenters disagreed with our proposal to eliminate the regional floor in which hospitals receive the higher of the national rate or 85 percent of the national rate and 15 percent of the regional rate applicable to the region in which the hospital is located.

Response: We are eliminating the regional floor because the legislative authority for continuing it expires September 30, 1990. In the absence of specific legislative authority, we are required to use a full national rate beginning in FY 1991.

B. Sole Community Hospitals (§ 412.92)

Under the prospective payment system, special payment protections are provided to sole community hospitals (SCHs). An SCH is a hospital that, by reason of factors such as isolated location, weather conditions, travel conditions, or absence of other hospitals, is the sole source of inpatient hospital services reasonably available to Medicare beneficiaries. The regulations that set forth the criteria that a hospital must meet to be classified as an SCH are at § 412.92(a). Currently, to be classified as an SCH, a hospital must either have been designated as an SCH prior to the beginning of the prospective payment system, or it must be located in a rural area and meet one of the following requirements:

- It is located more than 35 miles from other like hospitals.
- It is located between 25 and 35 miles from other like hospitals, and it—
  - —Serves at least 75 percent of inpatients in its service area; or
  - —Has fewer than 50 beds and would qualify on the basis of serving 75 percent of its area's inpatients except that some patients seek specialized care unavailable at the hospital
- It is located between 15 and 35 miles from other like hospitals and isolated by local topography or extreme weather for 30 days in each 2 out of 3 years.

Effective with hospital cost reporting periods beginning on or after April 1, 1990, section 1886(d)(5)(D)(i) of the Act, as amended by section 6003(e) of Public Law 101–239, provides that SCHs are paid based on whichever of the following rates yields the greatest aggregate payment: the Federal rate applicable to the hospital (that is, the Federal national rate which for discharges occurring before October 1, 1990 is subject to the regional floor), the updated hospital-specific rate based on FY 1982 cost per discharge, or the updated hospital-specific rate based on FY 1987 cost per discharge. (See a more detailed discussion of this provision above in section II.B.2 of this preamble.)

1. Travel Time

Section 6003(e) of Public Law 101–239 also added a new section

1886(d)(5)(D)(iv) of the Act, which directs the Secretary to establish criteria to determine whether a hospital should be classified as an SCH "because of the time required for an individual to travel to the nearest alternative source of appropriate inpatient care."

In developing a proposed travel time policy, we consulted with many public and private sources to determine if there was already in existence an established system to measure travel time in rural areas. We sought advice on this issue from other governmental agencies, public and private health care officials, consultants in health care administration, and members of the travel and map-making industries. We found no existing system that could be applied to measure travel time between rural hospitals on a nationwide basis. Where there is travel time data, the data are limited to travel time between major urban areas and are based primarily on travel via interstate and major urban highways. Existing travel time studies do not take into consideration travel time on rural roads or the effects of variable weather conditions. Based on consultation with the entities and individuals mentioned above and with hospital personnel and other interested parties, our proposed travel time policy was based on the best data we were able to obtain.

We considered permitting a hospital to qualify for SCH status based solely on a statement from a disinterested party (such as the State Highway Administration or State Police Department) certifying the time required to travel between two rural hospitals. Although we did not include this as part of our proposal, we invited comments on whether this would be a viable policy. We also invited suggestions as to who the certifying official should be if such a system were enacted and what criteria should be established for measuring the travel time.

We proposed to continue many of the same definitions that we had already incorporated into the SCH regulations. That is, we proposed to define "alternative source of appropriate inpatient care" as we previously defined "like hospital" in § 412.92(c)(2) of the regulations. Alternative source means a hospital furnishing short-term, acute care. Consistent with our current policy, we proposed not to evaluate the comparability of specialty services offered by hospitals in determining SCH status.

We also proposed to define "nearest" as we had in the past in § 412 .92(c)(1), that is, as the shortest distance in miles measured over improved roads. An improved road is any road maintained by Federal, State, or local governmental entity and available for use by the general public.

We believe that 45 minutes is a reasonable measure of travel time between rural hospitals and we proposed to use it as the standard to determine SCH qualification under this provision.

In developing our proposed policy, we considered all of the factors that influence the length of time required to travel from one location to another. We believe that some factors (such as time of day, age and experience of the driver, and age and condition of the vehicle being used) are so variable that they are unreliable as consistent measures of travel time. Other factors, such as traffic congestion, elevation changes, and traffic lights, are extremely difficult to measure by themselves. However, we did identify three factors that affect travel time—distance, speed limit, and predictable weather conditions—that can be objectively measured and we proposed to use them to determine whether a hospital should be classified as an SCH based solely on travel time. That is, we proposed that to qualify as an SCH based on travel time to the nearest alternative source of appropriate inpatient care, a hospital would have to show that it takes at least 45 minutes to travel to the nearest like hospital using the fastest route and traveling at 90 percent of the maximum posted speed limit. In areas meeting certain severe weather conditions, we proposed to add an additional factor (described below) to the travel time.

We proposed the following formula to determine whether a hospital should be classified as an SCH based solely on travel time to the nearest available source of appropriate inpatient care:

$$\text{Travel Time} = \left[\text{Distance} \div \left(\frac{\text{90\% of the Speed Limit}}{\text{60 Minutes}}\right)\right] \times \left(\text{Weather Conditions Factor}\right)$$

We proposed that the requesting hospital would be classified as an SCH if the travel time between hospitals equals 45 minutes or more using this formula. If the travel time is less than 45 minutes, we proposed that the hospital would not be classified as an SCH based on the travel time criterion. However, we noted that a hospital that does not qualify based on travel time may still qualify for SCH status under the market share test.

a. *Speed Limit.* We proposed to base our determination on 90 percent of the maximum allowable posted speed limit. Our use of 90 percent of the maximum allowable speed limit takes into consideration factors such as traffic lights, stop signs, and congestion that increase travel time, but that are not measurable by speed limit, distance, or weather conditions. This 90 percent factor also takes into consideration the fact that not all drivers travel at the maximum allowable speed limit. We recognize that the allowable speed limit may vary considerably on the same road; that is, a roadway may have a speed limit of 55 miles per hour for open areas but lower limits for travel through towns, in areas of heavy congestion, or around sharp curves. In making our determination, we proposed that the speed limits would be prorated based on the distance traveled. For example, if a trip involves travel at 55 miles per hour for 10 miles and at 40 miles per hour for 5 miles, the distance that must be traveled at the different speed limits would be taken into consideration.

To calculate travel times, we proposed to round all calculations to two digits to the right of the decimal point (one-hundredths). If the third digit is five through nine, we proposed to round upward; if the third digit is one through four, we proposed to round downward.

We recognize that major changes in elevation influence the time required to travel between two locations. However, we found it to be very difficult to measure elevation changes equitably, and we, therefore, did not include elevation changes in our proposed formula. We also found it problematic to measure consistently the effects of other impediments to travel such as variable traffic congestion, school bus stops, traffic lights, stop signs, and railroad crossings.

However, we believe that all these variable factors are considered in establishing the speed limit permitted on any given road. That is, steep inclines,

areas approaching traffic lights, and severe curves generally have lower posted speed limits than do areas across level open sections of road. In establishing speed limits, the State and local governments also take into account such factors as the type of road being traveled (for example, limited access, four-lane highways generally have higher speed limits than unlimited access, two-lane, farm-to-market roads), areas of limited visibility, excessive congestion, road crossings, and school zones. Therefore, we believe the speed limit is not only a major factor that must be considered in measuring travel time between two hospitals, but it is also an important indicator of many other variable factors affecting travel time.

b. Distance. In most instances, the shortest distance between two hospitals will also be the fastest. However, in those instances where a slightly longer route may be considerably faster than a shorter, more direct route, we proposed to base our travel time determination on the faster route for purposes of determining SCH status based on travel time to the nearest like hospital. That is, there may be areas where there is more than one possible route between hospitals. One route may involve travel of 33 miles over a limited access, four-lane highway on which the posted speed limit is 55 miles per hour. The other route may require travel via a two-lane road with a maximum speed limit of 35 miles per hour, but the distance is only 30 miles. In this example, it would require 57.14 minutes to make the trip using the shorter route—

$$\left[30 \div \left(\frac{35 \times .9}{60}\right)\right] = 57.14$$

but only 40.00 minutes to make the trip using the longer route—

$$\left[33 \div \left(\frac{55 \times .9}{60}\right)\right] = 40.00$$

If we considered the time it takes to travel the shortest route rather than the fastest travel time, this hospital would qualify (57.14 minutes is greater than 45.00 minutes). However, it takes only 40.00 minutes to travel the longer route. Thus, the two hospitals are less than 45 minutes apart. Therefore, in considering whether a hospital qualifies as an SCH in this example, we proposed to base our determination on the longer but faster route to the nearest like hospital.

c. Weather Conditions. The third factor that affects travel time is severe weather conditions. Rainfall, snow, ice, and fog may slow travel speeds below the posted limits. Because such conditions are so variable, it is not possible to measure their impact precisely. However, based on data from the National Oceanic and Atmospheric Administration (NOAA) of the United States Department of Commerce, we know the conditions that prevail in various areas based on data gathered and averaged, in most cases, over at least the last 30 years. NOAA complies climatological data from 271 weather stations across the country on a daily basis and has prepared charts detailing the mean number of days per year on which certain weather conditions have occurred at each of these stations based generally on at least 30-year averages. The data show, for example, the average number of days per year during which a particular weather station reported at least 0.01 inches or more of precipitation, heavy fog that limited visibility to one-quarter of one mile or less, and accumulated snowfall or ice pellets measuring 1.0 inch or more.

We believe these data are the most accurate and current data available and represent an equitable assessment of weather conditions likely to impede travel in any given area. For instance, the city of Goodland, Kansas has an average of 11.9 days per year during which snow or ice pellet accumulation measures 1.0 or more inches. Precipitation of 0.01 inch or more falls on an average of 76.5 days per year in Goodland, and heavy fog that limits visibility to one-quarter mile or less occurs on 27.8 days per year. These same data are available for each of the 271 weather stations across the United States.

We believe weather conditions should be considered as a factor in travel time only when they are prevalent for a significant number of days during the year. Listed below are the proposed lower limits that we believe constitute significant disruptions to travel time.

SIGNIFICANT DISRUPTIONS TO TRAVEL TIME

Type of atypical weather condition	Lower limit of days annually
Average number of days annually on which the amount of snowfall or ice pellets is greater than 1.0 inch	25
Average number of days annually on which precipitation is greater than 0.01 inch	160
Average number of days annually with heavy fog (visibility of ¼ mile or less)	50

For each of these lower limits that are exceeded in the hospital's area (according to NOAA data), we proposed to use an additional weather factor of 10 percent. Thus, if the hospital's area exceeds the lower limit in only one category, we proposed to use the following formula:

$$\text{Travel Time} = \left[\text{Distance} \div \left(\frac{\text{90\% of the Speed Limit}}{\text{60 Minutes}}\right)\right] \times 110\%$$

For example, if the distance times 90 percent of the speed limit divided by 60 results in travel time of 41.00 minutes and the NOAA data indicate that the area in which the hospital is located is subject to heavy fog during 60 days each year, we proposed to multiply the 41.00 minutes by 110 percent resulting in travel time of 45.10 minutes. If the NOAA data indicate the area in which the hospital is located is subject to heavy fog during 55 days per year and it is also subject to rainfall of at least 0.01 inch on 175 days per year, we proposed to multiply the product of speed divided by 60 times the distance by 120 percent resulting in travel time of 49.20 minutes.

In the proposed rule, we stated that in order to ensure consistency in making SCH determinations, we would accept only the data published by NOAA as evidence of these types of weather conditions. A hospital will not have to furnish NOAA data to us since we have a complete set of the most current data published for each weather station. For

the convenience of the reader, we have included in Table 9 in section IV of the Addendum to this final rule a list of the NOAA data on which we will base our decisions concerning the weather conditions factor. These data are also available to hospitals upon request to NOAA. If a hospital wishes to obtain these data from NOAA, it may do so by writing to: United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center, Federal Building, Asheville, NC 28801.

The hospital should identify itself by its location in or near a city and state and request the most current "local climatological data, annual summary with comparative data" for its area.

In making our determination regarding applicable weather conditions, we proposed to consider the weather conditions reported by the weather station located closest to the requesting hospital (using air miles). In the event a hospital is located virtually equidistant between two weather reporting stations, we proposed to average the weather conditions of the two stations.

Following are two examples of the travel time calculation:

Example 1

Hospital A is located 25 miles from the nearest like hospital. The fastest route between these hospitals involves traveling 15 miles at 55 miles per hour and 10 miles at 40 miles per hour. There are no severe weather conditions prevalent in the area.

(1) Driving 15 miles at 55 mph requires 18.18 minutes.

$$\left[\ 15 \text{ miles} \div \left(\frac{90\% \times 55 \text{ mph}}{60 \text{ minutes}} \right) \right] = 18.18 \text{ minutes}$$

(2) Driving 10 miles at 40 mph requires 16.67 minutes.

$$\left[\ 10 \text{ miles} \div \left(\frac{90\% \times 40 \text{ mph}}{60 \text{ minutes}} \right) \right] = 16.67 \text{ minutes}$$

In this example, it requires 34.85 (18.18 plus 16.67) minutes to travel from Hospital A to the nearest like hospital; therefore, the hospital would not qualify as an SCH based on travel time.

Example 2:

Hospital B is located 26 miles from the nearest like hospital. There is only one road between the two hospitals and the speed limit on it is 40 miles per hour for its entire distance. The area has severe fog for 70 days each year.

(1) Driving 26 miles at 40 mph requires 43.33 minutes.

(2) Multipying 43.33 minutes by 110 percent yields 47.66 minutes travel time between hospitals.

In this example, the travel time between hospitals exceeds the 45 minute standard and the hospital would qualify as an SCH.

The proposed rule provided that it is the hospital's responsibility to submit evidence of the distance to the nearest like hospital (using the fastest route) and to document the maximum posted speed limits along the route. Thus, the hospital is required to explore each reasonable alternative route to determine which is the fastest. As evidence that the hospital meets these criteria, the hospital must submit, as part of its request, a road map that shows as much detail as possible. Where speed limits vary along the fastest route, the hospital will mark the route to show the distance subject to each speed limit and the posted speed limit for each distance. That is, a hospital will mark each change in speed limit along the route to show the mileage and the posted speed limit for each section.

It will be the responsibility of the hospital to submit sufficient data to permit the intermediary and the HCFA regional office to make a determination based on distance and speed limits. The data will be subject to verification. The HCFA regional office will apply the NOAA data regarding weather conditions and make a determination regarding the hospital's qualification for SCH status based on travel time. The HCFA regional office will then notify the intermediary of its determination.

Comment: Seven commenters responded to our request for comments on whether travel time should be determined by a disinterested third party (such as the State Highway Administration or State Police Department) certifying the time required to travel between two rural hospitals. Four of these commenters stated that they favored third party involvement. Two proposed that the State Police or a State transportation official should document the travel time using the criteria proposed by HCFA. One commenter suggested that travel time should be documented by the State Highway Patrol or a State transportation agency employee but the certifying official should not be bound by criteria outlined by HCFA; that is, the official should have the latitude to base the decision on local weather conditions. The fourth commenter suggested that a State official certify the travel time between hospitals.

Three commenters opposed the idea of basing travel time on the certification of a third party. Two of them believe that such a policy would allow too much inconsistency between areas and would require a new oversight function for HCFA to monitor.

Response: We have decided not to implement use of a third party certification a this time. We agree with the commenters who stated that it would be difficult to ensure consistency and interpretation of policy rules nationwide.

Comment: Two commenters expressed concern over the logistics of implementing the proposed travel time formula in mountainous areas where the speed limit may fluctuate often because of curves in the road. One of the commenters suggested that the distance around lower speed curves be measured from where the cautionary sign indicating the lower recommended speed limit is posted on the the right hand side of the road to where the sign is posted for the curve on the opposite side of the road. The other commenter suggested that using the prescribed formula to measure travel time in mountainous areas would be extremely burdensome. Instead, the commenter favors using a factor lower than 90 percent based on the number of speed changes with a one mile distance; that is, the commenter suggested that

variable percentage factors be applied based on the number of speed changes within a one mile distance with the presumed constant speed limit of 55 miles per hour.

Response: We agree that our formula may be burdensome in the situations cited, that is, where there are many changes in the speed limits through mountainous areas. However, we cannot identify an alternative method that would equitably and objectively measure travel time and that can be implemented on a national basis. We agree with the suggestion that the distance on curves be measured between the recommended speed limit signs that are posted on each side of the road. We believe that this is an excellent way to determine the distance to be measured at the lower speed limit.

However, we do not agree with the other suggestion that a lower percentage factor should be applied based on the number of speed changes within a mile. We believe that such a formula would be less precise in measuring actual travel time between hospitals because it would not recognize severity of the road curves or individual speed limits assigned to them, for example, some curves might have a posted speed limit of 45 miles per hour while some severe turns might have a recommended speed limit of only 15 to 20 miles per hour. The commenter's proposal would measure only the number of speed changes, not the severity of the curves or the time required to navigate the road.

Comment: Three commenters stated that our proposed travel time criteria are confusing in that we did not reiterate that the travel time standards are in addition to the existing criteria that allow a rural hospital to qualify for SCH status based solely on distance or on distance plus a percentage of the market share.

Response: We did not mean to imply in our proposed rule that the travel time criteria were to replace the existing SCH standards. We did note (55 FR 19454) that a hospital that does not qualify for SCH status based on the travel time criteria may still qualify based under the market share test. We wish to emphasize that the existing SCH criteria remain in effect and that the travel time criteria are in addition to the standards defining distance, market share, and inaccessibility at § 412.92(a) (1), (2), and (3).

Comment: Two commenters stated that the travel time standards should based on the time required to travel under emergency or urgent conditions. One commenter believes that the travel time standard should be no more than 20 minutes by private automobile or 12 minutes by emergency vehicle. The other commenter suggested that the standard be set at 35 minutes. In addition, these commenters and one other commenter argued that the availability of specialty services, for example, emergency room or trauma care, provided by a hospital should be a consideration in defining "like hospital" as a part of determining SCH status.

Response: There was no indication that Congress intended that the travel time standard be established primarily for emergency situations. That is, we believe that Congress intended that travel time criteria be established to supplement the existing criteria for SCH status that rely primarily on distance to determine SCH status. Neither the statute nor the Congressional reports contain any reference to setting the travel time to accommodate emergency travel times. Rather, we believe that the purpose of section 1886(d)(5)(D)(iv) of the Act is to recognize that, although two hospitals may be located less than 35 miles apart, local topography, weather conditions, and other factors can result in an unusually long driving time between the facilities. That is, two hospitals 34 miles apart may be quite accessible to each other if the road between them is a four-lane, flat stretch of road with a 65 mile per hour speed limit. However, if the road between these same two hospitals is a narrow, two-lane road winding through a mountainous area where snowstorms occur frequently, it may require a considerable amount of time to travel between the hospitals and SCH status would be appropriate. We adopted the 45 minute travel time standard because the average travel time between two hospitals 35 miles apart is 45 minutes.

We do not agree with the commenter's suggestion that the availability of certain essential or specialty services should be a consideration in determining SCH status based on travel time. Again, there is no indication that Congress intended that the provision of a unique specialty service be taken into account in developing the SCH travel time specifications. We believe that the travel time standard was added as an alternative to distance only and was not intended to provide an alternative definition of nearest hospital as well. Therefore, the definition of nearest hospital under the travel time standard should be consistent with the definition used in applying the 35 mile standard. Accordingly, we have defined "alternative source of appropriate inpatient care" as the nearest hospital furnishing short-term acute inpatient care.

Furthermore, we do not believe that the SCH provision is intended to protect hospitals providing unique specialty services. Rather, we believe that the SCH provision is intended to ensure Medicare beneficiary access to care ordinarily found in general community hospitals. Therefore, we are not accepting the commenters suggestions at this time.

Comment: Three commenters expressed concern regarding our decision to use the NOAA's weather data as the basis upon which we would determine the weather condition factor. Two commenters pointed out that because the number of weather stations is limited and they are located for the most part in large metropolitan areas, there may be a significant difference between the weather conditions at the reporting weather station and the weather conditions at a rural hospital. In addition, the commenters noted that the likelihood of a significant difference between weather conditions is particularly true in mountainous areas where weather conditions may vary significantly at different elevations although two points may be relatively close in terms of air miles. One commenter suggested that the HCFA regional offices be granted authority to make case-by-case determinations on the impact of weather conditions in borderline cases. The other commenters suggested that we use an independent authority, such as the State transportation agency or the State highway patrol, to determine weather conditions.

One of the same commenters suggested that because weather patterns have been changing over the last several years, we should use only a 5-year pattern, rather than a 30-year pattern, to reflect the most current weather conditions prevalent in an area.

Finally, one commenter requested an explanation of how the lower limits were arrived at in determining whether the weather factor would be used in calculating travel time. That is, the commenter would like to know the basis upon which we selected 160 days of precipitation, 25 days of snow or ice, and 50 days of fog as the lower limits for factoring in weather conditions as significant impediments to travel.

Response: We recognize the limitations inherent in using the NOAA weather data, which is based on the conditions reported at 271 weather stations throughout the United States. It is true that the weather conditions occurring at a rural hospital may not be identical to those reported at the nearest weather station. However, we believe

this will work to a hospital's advantage as often as to its disadvantage. We continue to believe that it is important that we rely on a single consistent national source for weather data to ensure that all hospitals are treated equally in applying for SCH status under the travel time standards. For this reason, we do not agree with the commenter who suggested that a State official be used as the authority to identify severe weather patterns in a given community. As discussed above in another comment and response, we believe reliance on local or State officials to determine what weather conditions constitute severe impediments to travel time could result in inconsistent determinations nationwide. In making a final determination on a hospital's SCH status based on the travel time criteria, the HCFA regional offices will consider any additional documentation the requesting hospital wishes to submit, but the final determination will be based primarily on the NOAA data from the nearest (by air miles) weather station.

In regard to the comment that we should use only the most recent 5-year weather pattern, rather than the longer periods maintained by NOAA, to identify the most current conditions, we do not agree with the commenter's suggestion. While weather patterns in some areas of the country may have changed in the last several years, we have no way to predict that these trends will continue into future years. We believe the longer periods maintained by NOAA present a more reliable forecast of the weather conditions most likely to occur in future years. And, to the extent that weather patterns have varied in the last several years, use of a limited period of time is as likely to work to a hospital's disadvantage as to its advantage. Thus, we continue to believe that the longer periods maintained by NOAA (and updated annually to reflect changes) are the most accurate source of weather conditions available.

In setting the limits on the number of days for each type of weather condition that we believe constitute significant impediments to travel time, we relied primarily on two factors: first, as noted in the proposed rule (55 FR 19453), we believe weather conditions should be considered only when they constitute a significant disruption to travel time. To this extent, we relied on our best judgment as to the number of days and the type of weather conditions that are significant.

Because we believe snow and ice are the most serious impediments to travel time, we set the limit for this weather condition relatively low, that is, 25 days (6.85 percent of a year). We believe fog is somewhat less likely to slow traffic significantly than is snow or ice and is also less likely to occur for prolonged periods of time. In many areas, heavy fog commonly occurs during only a small portion of a day such as early morning. For this reason, we set a higher standard for fog—50 days a year or 13.70 percent of the total annual days. Rain, on the other hand, particularly 0.01 inch, may not have a significant impact on travel time. In some areas, in the mountains or along the coasts, a brief rain shower may occur almost daily during certain times of the year. Thus, we set the limit for rain substantially higher (160 days annually or 43.84 percent of the total days) than for the other weather conditions.

In addition, in setting these limits, we also determined how many of the weather stations reported conditions above and below each proposed limit. For the limits we proposed, we found that there were approximately 20 stations in each of the three categories that reported conditions that exceeded our limits.

We would also like to take this opportunity to clarify that these limits (1.0 inch of snow, fog with visibility of ¼ mile or less, or 0.01 inch of rain) may not be used to document inaccessibility under § 412.92(a)(3) of the regulations. That section states that a hospital may qualify as an SCH if the nearest like hospital is located between 15 and 35 miles away, but because of local topography or periods of prolonged severe weather conditions, the other hospital is inaccessible for at least 30 days in each 2 out of 3 years. We believe there is a significant difference between the weather conditions discussed above, which may slow travel time, and the weather conditions that constitute inaccessibility.

The standards for the amount of snow/ice, fog, and rain are only one of many factors to be considered in determining the time required to travel from one rural location to another, and we have admittedly accepted minimal amounts in each of the three categories. We believe entirely different standards must be considered in defining "inaccessibility." In accessible means that it is not possible to travel safely to the other hospital on improved public roadways. It does not mean that the State transportation department or the State Highway Patrol has declared a snow emergency or has advised motorists to avoid unnecessary travel. A snow emergency is often declared when only small amounts of snow have fallen so that highway crews are able to clear and treat roadways unimpeded by excessive traffic. Therefore, we would not accept 30 snow emergency days in a year to constitute inaccessibility in meeting the § 412.92(a)(3) criteria.

We do not believe that it is realistic to set specific standards for this criteria (for example, in terms of inches of snow) because we believe the standards will vary from one section of the country to another. For example, a few inches of snow in a Southern State could effectively make the roadways inaccessible for a period of time because that area does not maintain the equipment or resources to clear snow from the roadways. However, the same few inches of snow in one of the northern States may be plowed and the roads salted or sanded relatively quickly because those States do maintain the equipment, crew, and materials necessary to deal with such conditions. Thus, we believe that for this criterion, the HCFA regional offices must make the determination on availability for SCH status using their knowledge of local conditions.

Hospitals that are located between 15 and 35 miles from the nearest like hospital and that are attempting to qualify for SCH status on the basis of the inaccessibility standard may submit documentation from any source to support their request. But we wish to stress that the documentation must show that the roadway was closed or inaccessible. Statements such as "the roads were hazardous" or "difficult to travel" or "the State police recommended that travel be limited" do not document inaccessibility. HCFA regional office personnel, with the recommendation from the hospital's fiscal intermediary, have the final responsibility for determining whether the nearest like hospital was "inaccessible" for at least 30 days a year in 2 of the last 3 years. We believe the most likely situations in which weather conditions will alter a hospital's accessibility sufficiently to permit it to qualify for SCH status under this criterion are instances where heavy snowfall closes a mountain pass for extensive periods of time.

2. Volume Adjustment

Since the beginning of the prospective payment system, an SCH that experiences, due to circumstances beyond its control, a more than 5 percent decrease in inpatient hospital discharges from one cost reporting to the next is eligible to receive a payment adjustment. Section 4005(c)(1)(B) of the

Omnibus Budget Reconciliation Act of 1987 (Pub. L. 100-203) amended section 1886(d)(5)(C)(ii) of the Act to provide that a hospital that meets the criteria to qualify for SCH classification is eligible for the 5 percent volume adjustment even though the hospital does not receive payment as an SCH under the prospective payment system. That is, Congress recognized that there are instances where, although a hospital meets the criteria to qualify for SCH status, it would be more advantageous financially for a hospital to be paid based on fully Federal rates than under the 75 percent hospital-specific payment rate plus 25 percent Federal Regional payment rate formula that was in effect at that time. Therefore, Congress extended the protection of the volume adjustment to such facilities.

Section 6003(e)(1)(iv) of Public Law 101-239, which replaced section 1886(d)(5)(C)(ii) of the Act with a new section 1886(d)(5)(D) of the Act, did not include this provision in the amendment. Thus, we believe that it is clear that Congress did not intend that this provision continue to apply. In addition, we also believe that this provision is no longer necessary because, as provided in section 1886(d)(5)(D)(i) of the Act, for cost reporting periods beginning on or after April 1, 1990, an SCH will automatically be paid based on whichever of the following rates yields the greatest aggregate payment: its hospital-specific rate using either 1982 or 1987 as the base year or the Federal rate. Thus, a hospital can no longer be disadvantaged by receiving payment as an SCH and the original provision is no longer beneficial to any hospital. Therefore, we proposed to eliminate § 412.92(f), "Additional payments to other hospitals experiencing a significant volume decrease," effective with cost reporting periods beginning on or after October 1, 1990.

For similar reasons, we also proposed to eliminate § 412.92(g), "Payment adjustment for new inpatient facilities or services." Section 9111(a) of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Pub. L. 99-272) amended section 1886(d)(5)(C)(ii) of the act to provide for an adjustment to the payment amounts to compensate an SCH reasonably for the increased costs of adding new services or facilities. The law limited this provision to cost reporting periods beginning on or after October 1, 1983 and before October 1, 1989 as a temporary measure until a permanent payment methodology could be developed to recognize significant distortions in operating costs resulting from the addition of new services or facilities. Pending the enactment of legislation that would provide for a new payment methodology, we administratively extended this provision indefinitely in the September 1, 1989 prospective payment system final rule (54 FR 36480). However, the provisions of section 6003(e) of Public Law 101-239 implement a permanent payment methodology for SCHs that recognizes cost distortions in years subsequent to the implementation of the prospective payment system and provides the opportunity for payment based on a new base year (that is, FY 1987). Therefore, we proposed to eliminate this provision effective with cost reporting periods beginning on or after October 1, 1990.

Based on the language of the Conference Report that accompanied Public Law 101-239, we believe that Congress intended that we discontinue this special payment adjustment. The Conference Report states that the House bill "eliminates the adjustment provided for SCHs experiencing a significant increase in operating costs due to the addition of new inpatient facilities or services." (H.R. Rep. No. 386, 101st Cong., 1st Sess. 721 (1989).) Although the conference agreement concerning criteria for payment for SCHs includes the House provision with amendments, no amendment was made to this provision. Thus, the material from the House bill was accepted without change by the Conference Committee. Therefore, we believe that Congress intended that SCHs will no longer be eligible for the special payment adjustment concerning new inpatient facilities or services.

Comment: Two commenters objected to the proposal to eliminate the new services adjustment for SCHs. One commenter pointed out that the revised payment methodology allows recognition of cost distortions only if they occur before FY 1988. The other commenter stated that in formulating the new payment methodology for SCHs in section 6003(e) of Pub. L. 101-239, Congressional intent is that SCHs be paid the greater of 100 percent of the Federal rates or their own hospital-specific costs. The commenter believes to deny SCHs the new services adjustment directly conflicts with Congressional intent because the hospital-specific cost inflated through the current year may not approximate actual hospital-specific costs if new services are added after FY 1987.

Response: Although we appreciate the concerns expressed by the commenters, we do not agree with their suggestion that the new services adjustment be maintained. Congressional language was clear in specifying that SCHs should be paid using the Federal rate or 100 percent of their hospital-specific rate using 1982 or 1987 as the base year; that is, the statute clearly defines the years that can be used as the base period for the hospital-specific amounts and does not provide for adjustments for subsequent years. As discussed above in section II.B. of this preamble, we have made an exception for an adjustment to be made in a hospital's FY 1987 hospital-specific rate if it had a distinct part alcohol/drug unit in FY 1987 that was incorporated into the hospital as of FY 1988.

More importantly, as we noted in the proposed rule (55 FR 19455), we believe that Congress clearly intended that the new services adjustment be eliminated. The Conference Report that accompanied Public Law 101-239 stated that the House bill "eliminates the adjustment provided for SCHs experiencing a significant increase in operating costs due to the addition of new inpatient facilities or services." (H.R. Rep. No. 386, 101st Cong., 1st Sess 721 (1989).) Since the House version of this provision was accepted without amendment by the conference committee, we believe this language regulates elimination of the new services adjustment.

We would like to take this opportunity to clarify any issues that have arisen in regard to the criteria to be used in determining whether a hospital that is not an SCH qualifies as an SCH solely for the volume adjustment. We have been requested to state whether the hospital must have met the criteria for SCH qualification that were in effect during the cost reporting period in which it experienced the volume decline or whether it must meet the criteria in effect at the time it files its request. Also, if a hospital experiences at least a 5 percent decline in more than one cost reporting period, we have been asked whether it must demonstrate that it would have qualified as an SCH for each year.

We believe that the hospital must demonstrate that it met the criteria for SCH qualification at some point during the cost reporting period during which it experienced the volume decline (for example, as of the last day of the cost reporting period). We also believe that a hospital must demonstrate that it met the criteria for SCH qualification for each year for which it is seeking the volume adjustment. For example, a hospital qualified for a volume adjustment for its cost reporting period ending September 30, 1988 and demonstrated that it met the criteria to

qualify as an SCH based on the market share test. If it subsequently qualifies for another volume adjustment for its cost reporting period ending September 30, 1989, we believe the hospital must again demonstrate that it would have met the criteria to qualify for SCH status for that year.

C. Cancer Hospitals (§ 412.94)

In the September 1, 1989 final rule (54 FR 36484), we revised § 412.94(b) to clarify that a cancer hospital that elects payment on a reasonable cost basis continues to be subject to the requirements of the prospective payment system with respect to hospital inpatient services (specifically, the provisions concerning the payment for capital-related costs and the availability of periodic interim payments).

In a notice published in the **Federal Register** on December 29, 1989 that announced certain provisions of Public Law 101-239 that affect FY 1990 payments to hospitals, we discussed the provisions in section 6004(a) of Public Law 101-239, that relate to the exclusion from the prospective payment system of cancer hospitals and corresponding changes (54 FR 53754). Section 6004(a) of Public Law 101-239 amended section 1886(d)(1)(B) of the Act to exclude from the prospective payment system a hospital that the Secretary classifies on or before December 31, 1990 as a hospital involved extensively in treatment for or research on cancer (cancer hospital). Also to be excluded from the prospective payment system is a hospital that the Secretary classifies on or before December 31, 1991 as a cancer hospital, and which, on the date of the enactment of this provision (December 19, 1989), was located in a State operating a demonstration project under section 1814(b) of the Act. Exclusion from the prospective payment system applies to cost reporting periods beginning on or after October 1, 1989 for hospitals approved as cancer hospitals on or before December 19, 1989 and for cost reporting periods beginning on or after the date of classification for all subsequently approved hospitals.

A hospital that the Secretary has determined to be a cancer hospital is eligible to receive periodic interim payments under section 1815(e)(2) of the Act effective January 18, 1990 if it meets the criteria under § 413.64(h) for receiving these payments.

Under section 6004(a)(3)(B) of Public Law 101-239, for hospitals classified as cancer hospitals as of December 19, 1989, the reduction for payments of capital-related costs of inpatient services that had been applied to these hospitals as prospective payment hospitals was eliminated effective for portions of cost reporting periods or discharges occurring on or after October 1, 1986.

For hospitals classified as cancer hospitals after December 19, 1989, the reduction for payment of capital costs is eliminated for cost reporting periods beginning on or after the date of the classification.

Section 6004(b) of Public Law 101-239 amended section 1886(b)(3) of the Act by adding a new subparagraph (E) to provide that, for cost reporting periods beginning on or after April 1, 1989, the base year for determining target amounts for cancer hospitals is the hospital's cost reporting period beginning during FY 1987 unless the use of its FY 1982 cost per discharge and intervening updates creates a higher target amount.

We proposed to revise the regulations to conform with the requirements of these provisions. In addition, we proposed to transfer the regulations concerning the criteria that must be met to qualify as a cancer hospital and the payment adjustment applicable to an approved cancer hospital from § 412.94 in subpart G (Special Treatment of Certain Facilities) to § 412.23 in subpart B (Hospital Services Subject to and Excluded from the Prospective Payment System). Conforming changes were also proposed for § 412.90.

Comment: One commenter wrote regarding the fact that in the discussion on cancer hospitals, we did not address the fact that section 6004(b) of Public Law 101-239 allows rebasing for hospitals excluded from the prospective payment system by virtue of being approved as cancer hospitals. The commenter stated that he assumes that the statutory provision is self-executing and that no revision to the regulations is required.

Response: We addressed the issue of rebasing for cancer hospitals briefly in the December 29, 1989 notice. That is, we stated that, "Section 6004(b) of Pub. L. 101-239 amended section 1886(b)(3) of the Act by adding a new subparagraph (E) to provide that, for cost reporting periods beginning on or after April 1, 1989, the base year for determining target amounts for cancer hospitals is to be the hospital's cost reporting period beginning during FY 1987 unless the use of FY 1982 and intervening updates creates a higher target amount." (54 FR 53755.) We agree with the commenter that the statute is straightforward on this issue and we do not believe additional regulations are necessary to implement the provision.

D. Rural Referral Centers (§ 412.96)

Under the authority of section 1886(d)(5)(C)(i) of the Act, § 412.96 sets forth the criteria a hospital must meet in order to receive special treatment under the prospective payment system as a referral center (that is, payment is based on the other urban payment rate rather than the rural payment rate). One of the criteria under which a rural hospital may qualify as a referral center is to have 275 or more beds available for use.

A rural hospital that does not meet the bed size criterion can qualify as a rural referral center if the hospital meets two mandatory criteria (number of discharges and case-mix index) and at least one of three optional criteria (medical staff, source of inpatients, or volume of referrals). With respect to the two mandatory criteria, a hospital is classified as a rural referral center if its—

- Case-mix index is equal to the lower of the median case-mix index for urban hospitals in its census region, excluding hospitals with approved teaching programs, or the median case-mix index for all urban hospitals nationally; and
- Number of discharges is at least 5,000 discharges per year or, if fewer, the median number of discharges for urban hospitals in the census region in which the hospital is located. (We note that the number of discharges criterion for an osteopathic hospital is at least 3,000 discharges per year.)

1. Case-Mix Index

Section 412.96(c)(1) provides that HCFA will establish updated national and regional case-mix index values in each year's annual notice of prospective payment rates for purposes of determining rural referral center status. In determining the proposed national and regional case-mix index values, we followed the same methodology we used in the November 24, 1986 final rule, as set forth in regulations at § 412.96(c)(1)(ii). Therefore, the proposed national case-mix index value includes all urban hospitals nationwide and the proposed regional values are the median values of urban hospitals within each census region, excluding those with approved teaching programs (that is, those hospitals receiving indirect medical education payments as provided in § 412.118).

These values are based on discharges occurring during FY 1989 (October 1, 1988 through September 30, 1989) and included bills posted to HCFA's records through December 1989. Therefore, in addition to meeting other criteria, we proposed that to qualify for initial rural referral center status for cost reporting periods beginning on or after October 1,

1990, a hospital's case-mix index value for FY 1989 be at least—

- 1.2494; or
- Equal to the median case-mix index value for urban hospitals (excluding hospitals with approved teaching programs as identified in § 412.118) calculated by HCFA for the census region in which the hospital is located. (See table set forth in the proposed rule at 55 FR 19456.)

Based on the latest data available (through June 1990), the final national case-mix index value is 1.2524 and the median case-mix values by region are set forth in the table below:

Region	Case-mix index value
1. New England (CT, ME, MA, NH, RI, VT)	1.1788
2. Middle Atlantic (PA, NJ, NY)	1.1788
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	1.2534
4. East North Central (IL, IN, MI, OH, WI)	1.1824
5. East South Central (AL, KY, MS, TN)	1.1885
6. West North Central (IA, KS, MN, MO, NE, ND, SD)	1.1876
7. West South Central (AR, LA, OK, TX)	1.2568
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	1.2440
9. Pacific (AK, CA, HI, OR, WA)	1.2797

For the benefit of hospitals seeking to qualify as referral centers or those wishing to know how their case-mix index value compares to the criteria, we are publishing the FY 1989 case-mix index values in Table 3c in section IV of the addendum to this final rule. In keeping with our policy on discharges, these case-mix index values are computed based on all Medicare patient discharges subject to DRG-based payment.

2. Discharges

Section 412.96(c)(2)(i) provides that HCFA will set forth the national and regional numbers of discharges in each year's annual notice of prospective payment rates for purposes of determining referral center status. As specified in section 1886(d)(5)(C)(i)(II) of the Act, the national standard is set at 5,000 discharges. However, we proposed to update the regional standards, which are based on discharges for urban hospitals during the fifth year of the prospective payment system (that is, October 1, 1987 through September 30, 1988). That is the latest year for which we have complete discharge data available.

Therefore, in addition to meeting other criteria, we proposed that to qualify for initial rural referral center status for cost reporting periods beginning on or after October 1, 1990, a hospital's number of discharges for its cost reporting period that began during FY 1989 would have to be at least—

- 5,000; or
- Equal to the median number of discharges for urban hospitals in the census region in which the hospital is located. (See table in the proposed rule at 55 FR 19456.)

Based on the latest discharge data available, the final median number of discharges by census region are set forth in the table below.

Region	Number of discharges
1. New England (CT, ME, MA, NH, RI, VT)	6963
2. Middle Atlantic (PA, NJ, NY)	8248
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	6520
4. East North Central (IL, IN, MI, OH, WI)	7623
5. East South Central (AL, KY, MS, TN)	6000
6. West North Central (IA, KS, MN, MO, NB, ND, SD)	5330
7. West South Central (AR, LA, OK, TX)	4756
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	7255
9. Pacific (AK, CA, HI, OR, WA)	4968

We again note that to qualify for rural referral center status for cost reporting periods beginning on or after October 1, 1990, an osteopathic hospital's number of discharges for its cost reporting period that began during FY 1989 would have to be at least 3,000.

Based on the latest discharge data available, the final median number of discharges by census region are set forth in the table below.

Region	Number of discharges
1. New England (CT, ME, MA, NH, RI, VT)	6923
2. Middle Atlantic (PA, NJ, NY)	8248
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	6520
4. East North Central (IL, IN, MI, OH, WI)	7623
5. East South Central (AL, KY, MS, TN)	6000
6. West North Central (IA, KS, MN, MO, NB, ND, SD)	5331
7. West South Central (AR, LA, OK, TX)	4756
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	7255
9. Pacific (AK, CA, HI, OR, WA)	4968

We again note that to qualify for rural referral center status for cost reporting periods beginning on or after October 1, 1990, an osteopathic hospital's number of discharges for its cost reporting period that began during FY 1989 would have to be at least 3,000.

Comment: One commenter recommended that HCFA establish an exceptions process for rural referral center entitlement that would allow hospitals with new services to be approved retroactively based on the current year's case-mix index. The commenter stated that when a hospital adds a new service, it may significantly affect the hospital's case-mix index value. The commenter recognizes that the necessary data to calculate the case-mix index value might not be available at the start of the hospital's cost reporting period, but noted that once the data are complete, it could be applied retroactively to determine entitlement to the RRC adjustment. The commenter also stated that discharge standards should be based on more current data than are currently used.

Response: Under section 1886(d)(5)(C)(i) of the Act, we are required to establish the national and regional case-mix index and discharge standards using the case-mix index values, and number of discharges of urban hospitals across the country. We have to wait until the fiscal year has ended and most claims have been processed to determine these values. The case-mix index value and number of discharges of a rural hospital seeking to acquire rural referral center status are then evaluated against these standards for the same period. This necessarily requires that the standards be determined and published for a retrospective period of time.

Section 1886(d)(5)(C)(i)(I) of the Act also requires that a hospital seeking rural referral center status submit its application during the quarter preceding the start of its cost reporting period and states that any payment adjustment required as a result of reclassification as a rural referral center will be effective at the beginning of such cost reporting period.

Thus, we do not believe that section 1886(d)(5)(C)(i) of the Act would permit us to adopt the commenter's suggestions for either the number of discharges standard or for the retroactive application of the case-mix index standard. In addition, as we have previously noted in several Federal Register documents (51 FR 31474, 51 FR 42231, and 52 FR 33051), while we recognize that determining the standards based on data from prior years presents some difficulties for hospitals, we believe it is the only feasible method to ensure that rural hospitals are accurately and fairly evaluated against actual data from typical urban hospitals.

3. Withdrawal From Rural Referral Center Status

In the September 1, 1989 final rule (54 FR 36486), we stated that we would reinstate the triennial reviews of rural referral centers to ensure that they continue to meet the qualifying criteria since the statutory moratorium on implementation of the reviews set forth in section 9302(d)(2) of the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99-509) was due to expire with cost reporting periods beginning on or after October 1, 1989. In response to our reinstatement of the reviews, Congress included a new moratorium in Public Law 101-239.

Section 6003(d) of the Public Law 101-239 states that a hospital that was classified as a rural referral center (under section 1886(d)(5)(C) of the Act) as of September 30, 1989 (including a hospital covered under section 9302(d)(2) of Public Law 99-509) will continue to be classified as a rural referral center for cost reporting periods beginning on or after October 1, 1989 and before October 1, 1992.

We do not believe this provision was intended to preclude a hospital from voluntarily giving up its rural referral center status. In response to inquiries we received, we proposed to establish procedures to allow a hospital to withdraw voluntarily from its classification as a rural referral center and return to fully rural rates.

Section 1886(d)(5)(C)(i)(I) of the Act requires that applications for approval as a rural referral center be filed in the quarter preceding the start of a hospital's cost reporting period. Rural referral center classification, if approved, becomes effective only at the start of the hospital's cost reporting period. We do not, however, believe that a request for termination of rural referral center classification must meet these same standards. That is, we believe that a hospital may submit its request to voluntarily withdraw its rural referral center classification at any time during its cost reporting year.

We proposed to follow the same general procedures for a request to end rural referral center status as we currently use for a request to end sole community hospital status (§ 412.92(b)(4)). Therefore, voluntary termination as a rural referral center will be effective no later than 30 days after the date the hospital submits its request. We believe the "no later than 30 days" policy is in keeping with the prospective nature of the prospective payment system. The 30-day time frame provides the fiscal intermediary with sufficient time to alter its automated payment systems prospectively, thus avoiding expensive and time consuming reprocessing of claims. The variable time frame of "no later than 30 days from the date of the hospital's request" also permits the regional office, the intermediary, and the hospital to select a mutually agreeable date, for example, at the end of the month, to facilitate the change in rural referral center status. We expect that a hospital will anticipate when it plans to withdraw from rural referral center status and submit its request in sufficient time to facilitate the change.

Similar to our current policy on sole community requalification, a hospital that has voluntarily withdraw from rural referral center status may requalify at a later date only if it meets the criteria in effect at the time it wishes to reapply. That is, a hospital must submit its application during the quarter preceding its cost reporting period and it must meet the qualifying standards (that is, number of beds or case-mix index and number of discharges standards) in effect at the time it refiles. We received no comments on this issue, therefore, we are adopting the changes as proposed.

E. Indirect Medical Education Costs (§ 412.118)

Section 1886(d)(5)(B) of the Act provides that prospective payment hospitals that have interns and residents in an approved graudate medical education program receive an additional payment for the indirect costs of medical education. The regulations governing the calculation of this additional payment are set forth at § 412.118. Each hospital's additional indirect medical education (IME) payment is determined by multiplying the hospital's total DRG revenue by the applicable IME adjustment factor.

Section 1886(d)(5)(B)(ii) of the Act provides for an IME adjustment factor of approximately 7.7 percent for every 10 percent increase in the hospital's intern and resident-to-bed ratio that is used to determine the IME payment for discharges occurring on or after October 1, 1988 and before October 1, 1995. The education adjustment factor for discharges occurring on or after October 1, 1995 is approximately 8.1 percent for every 10 percent increase in the hospital's resident-to-bed ratio. We note that the education adjustment factor is an approximation because the adjustment factor is applied on a curvilinear or variable basis. An adjustment made on a curvilinear basis reflects a nonlinear cost relationship; that is, each absolute increment in a hospital's ratio of interns and residents to beds does not result in an equal proportional increase in costs.

As noted above, the IME payment in an add-on to a teaching hospital's total DRG payment and is intended to compensate for the additional operating costs (that is, indirect costs) incurred by the hospital in training interns and residents. Currently, in order to be eligible for an IME adjustment, hospitals are required to submit a listing with the names and social security numbers of all interns and residents enrolled in an approved program assigned to the hospital and providing services there on September 1. If September 1 falls on a weekend or a Federal holiday, the next business day is used for purposes of the count. This counting methodology assumes the September 1 count is representative of the number of interns and residents working in the acute care inpatient and outpatient portions of the hospital throughout the year.

In addition to IME payments, teaching hospitals are eligible to receive direct graduate medical education (GME) payments based on a per resident amount for the direct costs of training interns and residents. The statutory basis for these GME payments is in section 1886(h) of the Act. The per resident amount is based on the historical costs of the hospital's teaching program and is multiplied by the number of full-time equivalent (FTE) residents working in the hospital during the cost reporting period to compute the amount of the GME payment.

On September 29, 1989, we published a final rule in the **Federal Register** (54 FR 40286) that added a new § 413.86, which included a new counting methodology for determining resident FTEs for GME payment purposes. A full explanation of this methodology was set forth in that final rule (54 FR 40291). Basically, FTE status is based on the total time necessary to fill a residency slot. The number of hours involved may vary from specialty program to specialty program within a hospital and could vary from hospital to hospital for the same type of program. If a resident spends time in more than one hospital, that resident is not to be counted as one FTE for either hospital regardless of the actual hours worked. Rather, that resident's time is prorated among the hospitals to total no more than one FTE. Part-time residents are counted as partial FTEs based on the proportion of time worked as compared to the total time necessary to fill a full-time residency slot.

For example, if a part-time resident spends only 60 percent of the time necessary to fill a full-time residency

slot, the part-time resident is counted as .6 FTE. Similarly, in situations in which two residents "share" one residency slot, no more than one FTE is counted for the two individuals for the duration of the shared residency. In cases where a full-time resident spends time sequentially in more than one hospital or drops out of a program, the individual is considered a full-time resident whose assignments to hospitals would be prorated.

For several reasons, we believe that the GME methodology should be adopted for IME purposes. First is its superiority over the one-day count in capturing any fluctuations in the number of residents working in a hospital throughout the cost reporting year. In addition, there is a greater potential for abuse using the one-day count IME methodology. For example, situations may arise where a resident spends part of September 1 at a hospital that receives IME payments and the other part at a hospital or unit not receiving IME payments (that is, a hospital or unit excluded from the prospective payment system). In those situations, it may be difficult for the fiscal intermediary to detect a prospective payment hospital that inappropriately counts the resident as one FTE for IME payment purposes, since a hospital not receiving IME payments is not required to submit information in accordance with the one-day count to its fiscal intermediary. However, hospitals and hospital units excluded from the prospective payment system are required to submit information on interns and residents in accordance with the § 413.86 counting methodology. Similarly, it is difficult for the intermediary to detect situations where the September 1 count is not representative because the resident is assigned to the prospective payment hospital on September 1 but spends a portion of the year at an excluded or nonparticipating hospital (for example, a VA hospital).

Therefore, in § 412.118, we propose to revise the current one-day method for counting interns and residents for purposes of computing the IME adjustment to a method more consistent with that used for computing GME payments under § 413.86.

In the proposed rule, we noted that there are several important differences between the IME and GME intern and resident counts. The first is that the IME count is limited to the time residents spend in either a part of the hospital subject to the prospective payment system or in the outpatient department of the hospital. Examples of settings where residents' time would be excluded from the IME count are distinct part units of the hospital that are excluded from the prospective payment system (such as psychiatric or rehabilitation units) and other separately certified hospital-based providers (such as a hospital-based SNF). This limitation does not apply to the GME count. Consequently, for purposes of the IME count, we proposed that hospitals be required to submit information to their intermediaries indicating the amount of time residents worked in either a part of the hospital subject to the prospective payment system or in an outpatient department. Residents' time spent in other areas is excluded from the FTE count based on the proportion of time worked in those areas as compared to the total time necessary to fill a full-time residency slot.

A second difference between the two counts is that, on or after July 1, 1987, in determining the GME count, hospitals may consider the time residents spend in nonprovider settings such as freestanding clinics, nursing homes, and physicians' offices in connection with approved programs in determining the resident FTE count provided certain criteria are met. These residents may not be counted for IME purposes. Third, section 1886(h) of the Act specifies a weighting factor to be applied to the resident FTE count for GME. This factor is based on whether the resident is beyond his or her initial residency period. There is no weighting factor applied to the resident FTE count for indirect medical education.

The information required to be collected for IME will also be slightly different from that collected for GME. The major difference will be the need for documentation of the time the residents are assigned to a setting other than the inpatient area subject to the prospective payment system or the outpatient department. Some of the information required under GME will not be required for IME, such as that information required under paragraphs 413.86(f)(2) (ii), (v), (vi), and (vii). These primarily concern the collection of data for determining residents' initial residency period for applying the weighting factor. We proposed to include in § 412.118 all the requirements for collection of information necessary for determining the IME adjustment.

We received 15 letters on this proposal from hospitals and hospital associations, ProPAC, a law firm, fiscal intermediaries, and a medical specialty association.

In addition to the changes noted below, we are making a technical change at § 412.118. To be consistent with language in the GME regulations at § 413.86(b), which defines a "resident" as either an intern or a resident, we are replacing the term "interns and residents" with "residents" for IME purposes in section § 412.118.

Comment: A number of those submitting comments suggested that we delay implementation of the proposed methodology. Several reasons were given for the need to delay this change. The predominant one was that the fiscal intermediaries are currently reviewing the count of residents for GME payment purposes, and this review is not expected to be completed until December 1990. Hospitals will then have 6 months in which to appeal the results. It was suggested that implementation of the revised IME counting methodology should not begin until this process has been completed, and that using FTE counts that are only partially audited or that may not be determined in a standard manner in all areas of the country would be unfair and inequitable. The commenters generally recommended delaying the effective date of the change until cost reporting periods beginning on or after either July 1, 1991 or October 1, 1991.

Delay was also recommended in order to give hospitals time to make adjustments to their recordkeeping procedures used to track residents' time and to permit them to make the appropriate calculations to adjust the GME count so that this count may also be used for the IME count. Finally, one commenter felt that implementation should be delayed in order to ensure that the change would be budget neutral. This commenter recommended that the proposed IME count methodology be delayed at least until October 1, 1991, when accurate resident counts could be incorporated into the calculation of the standardized amounts as well as the IME adjustments to teaching hospitals.

Response: In consideration of the comments we received, we intend to make the change in the IME count effective for cost reporting periods beginning on or after July 1, 1991. A July 1 effective date will coincide with the academic year for residency programs, as well as being the cost report starting date for many teaching hospitals. We do not agree that the effective date should be postponed until October 1, 1991 given the existing requirement to collect most of the needed information for GME payment purposes, and our belief that the new methodology provides a superior means for determining resident FTE status. We believe that the change

should be implemented at the earliest feasible date.

Making the change effective for cost reporting periods beginning on or after July 1, 1991 will, in our opinion, provide ample time for hospitals to make adjustments in their recordkeeping to collect whatever information they do not presently collect that is necessary to comply with the requirements of the new counting method, in addition to providing time for questions arising from the GME audits to be settled. The only additional information we are requiring beyond what is already required for GME is an identification of the time spent in either an inpatient area subject to the prospective payment system or an outpatient department, and it is our experience that most hospitals currently do keep records that indicate the areas of the hospital where residents spend their time. In cases where this information is not now available, we are confident that the effective date will allow hospitals sufficient time to begin to collect it.

As the commenters stated, fiscal intermediaries are currently auditing hospital records for the purpose of implementing the per resident payments for GME. Both the count of residents and the costs to be included in the base year determination of per resident amounts are being reviewed. Therefore, we agree that there may be instances where a hospital's documentation of its residents' time may be subject to question by its fiscal intermediary, and these issues should be settled prior to implementing the new IME count. We believe that the timeframe for implementing this change will provide sufficient time to settle any questions about the adequacy of the hospital's records for determining the FTE count.

Finally, we do not agree that it is necessary to delay implementation until October 1, 1991 to ensure that the change will be budget neutral. We do not agree with the premise that the change should be budget neutral since it more accurately counts the number of interns and residents without changing the payment methodology. Further, the aggregate impact of the change on the number of residents counted for IME payment purposes should be negligible. Although the new methodology will better capture fluctuations at individual hospitals throughout the year, we believe that the cases where this will result in a significant difference from the current one-day count will be very limited. We note that fiscal intermediaries currently have authority to revise a hospital's one-day count when it is not representative of the full year. Therefore, intermediaries should already have accounted for cases in which a full year count results in a significantly different result. We acknowledge that where hospitals have used the one-day count to improperly count resident's time, such as in the situations described above, those hospitals' FTE counts will be reduced. However, we believe that the frequency and magnitude of such instances will be limited.

Comment: One commenter questioned our statutory authority to make the proposed change. The commenter referred to section 1886(d)(5)(B) of the Act, which states that the amount of the IME adjustment be "computed in the same manner as the adjustment for such costs under regulations (in effect as of January 1, 1983)." The commenter claims that we have consistently applied a one-day count for purposes of the IME adjustment, noting that September 30 was used as the day of the count as of January 1, 1983.

Response: There were no regulations in effect on January 1, 1983 that specifically described how the IME adjustment was computed. There was a description of the methodology to be used published in the **Federal Register** on September 30, 1982 (47 FR 43310). We believe that Congress, in enacting the prospective payment system, intended that the general policy in effect be adopted rather than the exact method of implementing that policy. By only changing the method used to count residents, we are not changing the manner in which the adjustment is computed. The basis for computing the adjustment is still the ratio of residents to available beds. We are not in any way changing the rules in which residents' time in the hospital may be counted.

As we noted in the proposed rule, we will not be using a weighting factor applied to the resident FTE count for IME, as required by section 1886(h)(4)(C) of the Act for GME. We anticipate that the change in actual resident FTE counts will be negligible and attributable to inaccurate counts under the one-day methodology. Thus, we believe that the change we have proposed is within our authority as well as our responsibility to make sure that the IME policy is consistently applied and the adjustment is accurately computed.

We also disagree with the commenter's assertion that we relied on a one-day count of residents as of January 1, 1983. At that time, residents' FTE status was determined based on the number of hours residents were employed by the hospital on a weekly basis. Residents employed for 35 hours or more per week were counted as one FTE, and those working less than 35 hours per week were counted as .5 FTE. While the commenter is correct in stating that the count was made based on the number of residents employed on September 30, the basis for determining FTE status was a weekly average of hours worked.

Comment: One commenter noted that it is critical to recognize any differences between the GME counting methodology and the methodology for IME, and to reconcile the GME count with what is intended for the IME count.

Response: We believe that the differences were clearly stated in the proposed rule (55 FR 19458). Three specific differences were noted, only one of which will require additional information (rather than adjustments to existing information). Hospitals will be required to document the time residents spend in either a part of the hospital subject to the prospective payment system or in the outpatient department of the hospital separately from time spent working at the hospital in other areas. The GME rules do not require that this distinction be made. Two other differences between GME counting methodology and IME counting methodology, for which no additional information is necessary beyond what is presently required, are as follows: On or after July 1, 1987, residents' time spent in nonprovider settings in connection with approved programs may be considered in determining the GME count but such time is not included in the IME count; and the GME methodology incorporates a weighting factor for residents beyond their initial residency period while no such weighting factor applies for IME.

Comment: One commenter suggested that a resident can account for more than one FTE. For example, if one resident works the same number of hours (4160) as two other full-time residents (2080 hours apiece) who are each counted as one FTE, that resident should be counted as two FTEs.

Response: It has been our policy that it is not appropriate to count any resident as more than one FTE, regardless of the number of hospitals in which he or she is providing services or the number of hours spent within an individual hospital. This policy was discussed in the September 3, 1985 final rule in which we instituted the September 1 one-day count (50 FR 35680). We do not intend to make any changes in this policy.

Comment: One commenter cited the proposed change as one that requires more complex and voluminous

information recordkeeping, leading to greater administrative costs in hospitals.

Response: We disagree with this assertion. As noted above, the only additional information required beyond that already required for the GME count is the need to record residents' time spent in settings other than inpatient areas subject to the prospective payment system and outpatient departments of the hospital. While we do not believe this will add a substantial burden, we also point out that any new costs associated with collecting this information would be offset by the fact that, beginning with hospital cost reporting periods starting on or after July 1, 1991, hospitals will no longer be required to prepare and report two distinct counting methodologies for IME and GME.

F. Offset for Physician Assistant Services (§ 412.120)

Under section 1861(s)(2)(K)(i) of the Act as added by section 9338 of Public Law 99-509, payment is made under part B for services provided by a physician assistant who is legally authorized to furnish these services in his or her State and who furnishes these services under the supervision of a physician in a variety of settings including hospitals. In addition, under section 1861(s)(2)(K)(i) of the Act, a physician assistant can perform covered services that would ordinarily be performed by a physician and he or she can serve as an assistant-at-surgery. These services must be performed incident to physician services. Limitations on the reasonable charge methodology apply depending on the type of service furnished by the physician assistant.

Before January 1, 1987, a hospital could not bill directly for physician assistant and assistant-at-surgery services. However, section 9338 of Public Law 99-509 allows the employer of a physician assistant to bill directly under part B for these services furnished on or after January 1, 1987 if the employer is eligible to receive reasonable charge payments. In addition, under sections 1842 (b)(6)(C) and (b)(12)(A) of the Act, payment for physician assistant and assistant-at-surgery services is made only to the employer on an assignment-related basis.

Since the beginning of the prospective payment system, inpatient services incident to physician services could no longer be directly billed under part B, but payment for these services was included in the DRG payments. An adjustment was made to the prospective payment rates to account for the estimated costs of inpatient services previously billed under part B. Therefore, even though an employer may currently bill directly for physician assistant services, the costs of these services furnished on an inpatient hospital basis is still reflected in the DRG payment rates. This results in duplicate payments for physician assistant services. To eliminate these duplicate payments, section 9338(d) of Public Law 99-509 allows the Secretary to reduce the amount of payments made to hospitals under the prospective payment system.

We proposed to eliminate the duplicate payments for physician assistant services. That is, we proposed to implement an offset to DRG payments for direct billings for services performed by physician assistants furnished in the part of the hospital that is subject to the prospective payment system. We proposed that the offset would be made periodically by the intermediary based on 100 percent of the reasonable charges paid to the hospital or other entity that employes the physician assistant for these services.

We proposed to amend the regulations at § 412.120 to require the hospital's intermediary to obtain the appropriate physician assistant billing data from the part B carrier. We proposed that the intermediary would calculate the amount to be offset from the hospital's payment based on the total physician assistant and assistant-at-surgery services performed on or after October 1, 1990 in those portions of the hospital subject to the prospective payment system.

Comment: We received numerous comments objecting to our proposal to offset the charges for services of physician assistants from hospital DRG payments on the basis that the costs associated with these services were not included in the base year costs from which the standardized amounts were derived. The majority of commenters argued that we should offset the costs related to providing physician assistant services, and not the directly billed charges. A few commenters suggested that the offset be made in the aggregate as a one-time adjustment to the standardized amounts.

Response: Since the beginning of the prospective payment system, payments for inpatient services incident to physician services were included as part of the DRG payment for a given inpatient stay. As such, the DRG payment was intended to represent payment in full for all inpatient services not provided by a physician. When the provision was enacted to allow employers of physician assistants to bill directly under part B for the services provided by physician assistants, Congress recognized the fact that duplicate payments would occur and therefore allowed the Secretary to reduce the DRG payments to eliminate these duplicate payments. We do not believe it would be appropriate to offset the costs rather than charges since the reasonable charges represent the actual payment made for these services. Therefore, in order to eliminate duplicate payment, we would have to offset the amount actually received for the service under part B (that is, reasonable charges) from the DRG payment. Offsetting the cost of the service would not accomplish this goal. Moreover, we do not believe that an aggregate adjustment to the standardized amounts is appropriate. Since the duplicate payments for physician assistant services are not being made to all hospitals under the prospective payment system, it is not equitable to apply an across-the-board offset against aggregate payments. We believe the offset should be targeted to the actual hospitals where the duplicate payments are being made.

Comment: One commenter stated that physician assistant services are generally not "incident to" services of physicians but are actually substitutes for physician services. As such, an offset to the DRG payment would not be appropriate. Another commenter stated that the offset to the DRG payment should only be made in cases where the hospital is the employer of the physician assistant. Since the cost associated with physician assistants employed by physicians are not hospital costs, no offset should be made to the hospital DRG payment when a physician is the employer of the physician assistant whose services are billed under part B.

Response: The commenters have raised concerns regarding the nature of the services provided by physician assistants that warrant further investigation. In general, we believe it is reasonable to assume that services furnished by physician assistants that are employed by the hospital are "incident to" services that were covered by the DRG payment; therefore, we continue to believe that it is appropriate to offset the part B billings by hospitals for services furnished by physician assistants who are hospital employees. We believe it is also appropriate to offset billings for physician assistant services otherwise paid for by the hospital. For example, if the hospital pays a physician for the services of a physician assistant and the physician bills Medicare for the services as the physician assistant's employer, we

would offset the reasonable charges for the services. We believe that further analysis is needed to determine the extent to which other services furnished by physician assistants who are employed by physicians are substitutes for physician services that would not have been covered by the DRG payment. Therefore, we are providing at this time that an offset will be made for physician assistant services only where the hospital is the employer or otherwise pays for the services of the physician assistant.

We are revising the proposed regulations at § 412.20 to provide that the offset will be applied only for services of physician assistants who are employed by the hospital. We plan to evaluate the services that are being provided by physician assistants employed by physicians to determine the extent to which they are substitutes for physician services in the hospital setting. We also plan to monitor whether our decision to offset only the billings for physician assistants who are employed by the hospital results in a shift in employment arrangements. Once our analysis is completed, we will revise our policy with respect to the offset for physician assistant services to the extent deemed appropriate.

Comment: One commenter noted that the FY 1987 base period used to determine payment to SCHs and MDHs could have two different billing methods for physician assistant services since the direct billing provision was effective January 1, 1990. The commenter suggested that if payment were made on the FY 1987 base hospital-specific rate (HSR), a full offset for physician assistant billings may not be appropriate since the FY 1987 base would not reflect a full year of costs for physician assistant services. The commenter suggested that the full offset be made for these hospitals but that the hospitals should be allowed an opportunity to reverse the offset by submitting cost information enabling the intermediary to exclude physician assistants' costs from the 1987 base HSR. The commenter concluded that the full offset would be appropriate if the hospital were paid based on the 1982 base HSR or the Federal rate.

Response: Under the revised payment methodology for SCHs and MDHs that is effective for cost reporting periods beginning on or after April 1, 1990, a hospital will be paid based on whichever of the following rates yields the highest aggregate payment: the Federal national rate applicable to the hospital, the updated HSR based on the FY 1982 cost per discharge, or the updated HSR based on the FY 1987 cost per discharge. We agree with the commenter that to the extent the hospital's FY 1987 base period covers the period after which physician assistant services became payable under part B (that is, any portion of the cost reporting period occurring on or after January 1, 1987), we do not believe an offset is needed since at most three months of the cost reporting period would be for a period when services furnished by a physician assistant were covered as an inpatient hospital service. Since physician assistant services were payable under part B for at least three-quarters of the FY 1987 base period, we are providing that a hospital paid based on its FY 1987 base HSR will not be subject to the offset for physician direct billings. We note that the main issue is whether the base period represents a period for which physician assistant services were covered as inpatient hospital services rather than whether the hospital actually incurred costs for physician assistants in its base period. For this reason, no adjustment is necessary to remove the costs incurred for services furnished by physician assistants before January 1, 1987 that would have been payable as a part B service on or after January 1, 1987. For the same reason, the offset will apply to a hospital paid based on its FY 1982 base HSR regardless of whether the hospital incurred costs for physician assistants in the same period.

The intermediary will determine at the close of the hospital's cost reporting period which of the three payment rates yielded the highest payment. In making this comparison, aggregate payments under the FY 1982 base HSR and the Federal rate will include the offset for physician assistant direct billings. Aggregate payments under the FY 1987 base will not include an offset.

VII. Direct Graduate Medical Education Payments (§ 413.86)

Section 1886(h) of the Social Security Act (the Act) authorizes hospitals and hospital-based providers to receive payment for training and instructing residents in approved direct graduate medical education (GME) residency teaching programs. The GME payment is for costs associated with an approved residency teaching program in medicine, osteopathy, dentistry and podiatry. Payment is based on a hospital's number of full-time equivalent (FTE) residents, who are working in the hospital during a cost reporting period, multiplied by a hosptial-specific per resident amount. (The term "resident" means an intern, resident or fellow who participates in an approved medical residency program.)

On September 29, 1989, we published a final rule in the **Federal Register** (54 FR 40286) that set forth changes in Medicare policy concerning payment for direct GME costs. That final rule was effective for cost reporting periods beginning on or after July 1, 1985. Audit instructions for fiscal intermediaries to determine the base period per resident amounts were issued on February 12, 1990. Since issuance of the September 29, 1989 final rule and the audit instructions, policy issues have surfaced that require further clarification concerning documentation necessary to support the cost and time allocations of teaching physicians and rotating residents. Additionally, the September 29, 1989 final rule provided that the update factors for later cost reporting periods would be published in the **Federal Register.**

A. Physician Cost and Time Allocations

To support the allocation of physician compensation costs in the areas of teaching and supervision, providers are required to furnish a written physician allocation agreement to the intermediary that specifies the respective amount of total time a physician spends in furnishing his or her services to the provider and to patients, including time for services that are not paid for under parts A and B of Medicare and other information required under the provisions in § 405.481(g). This is a long-standing Medicare policy that we wish to reaffirm.

However, considering the retroactive effect of the change in GME payment policy for cost reporting periods beginning on or after July 1, 1985, we now find that physician allocation agreements, time records and other information may on longer exist for the cost reporting period that began on or after October 1, 1983 but before October 1, 1984 (the base period) in establishing direct GME costs because the record retention requirements specified in § 405.481(g) only require the retention of each physician compensation allocation for four years after the end of each cost reporting period to which the allocation applies.

As an equitable solution to the problem of the nonexistence of physician allocation agreements, time records, and other information, we are allowing providers to furnish documentation from cost reporting periods subsequent to the base period in support of the allocation of physician compensation costs in the GME based period. This subsequent cost reporting

period documentation, which is an exception to the established record-keeping policy, only applies to the establishment of the base period physician compensation cost allocations for purposes of determining per resident amounts. It does not apply to determining reasonable cost payment for GME in the base period and in no way implies that similar relief is available for other issues in the GME base period or other cost reporting periods. It is only in the absence of base period documentation that subsequent documentation should be considered as a proxy for base period documentation for purposes of determining the per resident amount. In no event will the results obtained from the use of the records from a cost reporting period later than the base period serve to increase or add physician compensation costs to the costs used to determine the per resident amounts.

In applying this exception, intermediaries must follow a specific hierarchy regarding eligibility and documentation. First and foremost is the requirement that providers must submit all available documentation for the direct GME base period, as requested by the intermediary, or an explanation of the absence of this documentation. The intermediary will evaluate the data submitted and determine whether auditable documentation exits. If there is no documentation, the intermediary will advise the provider that it is required to disallow all physicians' costs based on the lack of documentation. However, the intermediary will also advise the provider that it may request the special exception described above.

If a provider requests the exception, intermediaries must use the documentation from the subsequent cost reporting period closest to the direct GME base period. In the event that the provider has no auditable documentation for any subsequent cost reporting period, the provider may perform a 3-week time study of all physicians' time for a period to be specified by the intermediary. The 3-week time period should not overlap the July 1 change of academic year.

In determining whether sufficient documentation exists in any one period, the provider not only must be able to support the allocation of cost to the resident cost center, but must also have data to support the RCE calculation. For example, where a provider has a signed contract with a physician indicating that all of the physician's time was spent teaching, it will still be necessary to support the RCE calculation, which is based on hours worked. Therefore, intermediaries will consider all potential data needs affecting the physician cost and allocations before they determine the need for a current time study.

We would stress that the use of documentation from the current year or a subsequent year is, at best, persuasive evidence rather than conclusive evidence. Accordingly, if the intermediary believes that any of the changes or modifications distort the reliability of the data, it will make whatever adjustments are necessary to ensure an accurate cost allocation. In addition, the intermediary will prepare a written statement documenting the facts and its conclusions concerning how the information distorts the realiability of the data and why the data should not be relied upon. Also, the intermediary will explain why its adjustments are appropriate. This statement will become part of the record as it may be used to support any action taken in subsequent reviews and appeals.

B. Rotating Residents

Teaching hospitals with approved GME programs have varying arrangements with other providers in which they exchange or rotate residents and continue to pay the salaries of their own residents, or rotate residents and receive payment from the other providers for the costs of the residents in the hospital's GME base period.

The September 29 rule specified that only the time the resident spent working at the teaching hospital or other portions of the hospital complex would be counted in determining the number of FTEs applicable to the hospital. Thus, regardless of which teaching hospital employs a resident who rotates among hospitals, each hospital would count the resident in proportion to the amount of time spent at its facility. Although the rule discussed how the time of the rotating resident would be counted, the rule did not explicitly address the treatment of the costs incurred by one hospital for residents working at another provider's site.

Prior to the changes in payment for GME provided for by section 9202 of the Consolidated Omnibus Budget Reconciliation Act of 1985 (Pub. L. 99-272), as amended by section 9314 of the Omnibus Budget Reconciliation Act of 1986 (Pub. L. 99-509), § 2020.8 of the Medicare Carriers Manual (HCFA Pub. 14-3) indicated that if a resident in an approved training program furnishes services in a facility that is part of a provider, the services are paid for on a reasonable charge basis. Conversely, if the facility is not part of a provider, the services of the resident are covered as physician's services if the resident is fully licensed to practice medicine by the State in which the services are furnished. Although the instruction is not explicit, it implied that the costs incurred by a teaching hospital for resident services furnished in another provider facility would be paid to the teaching hospital on a reasonable cost basis. This manual instruction was in effect during the GME base period.

Section 9292 of Public Law 99-272, which added section 1886(h) to the Act, established payment for GME on a per resident amount effective with cost reporting periods beginning on or after July 1, 1985. Section 9314 of Public Law 99-509 added section 1886(h)(4)(E) to the Act to allow a hospital, for purposes of determining FTEs, to count the time residents spend in patient care activities outside the hospital setting if the hospital incurs all or substantially all of the training costs in the outside setting. This change is effective as of July 1, 1987. Thus, although the costs for the time residents spend in patient care activities in outside settings are not allowable costs in the GME base year payment will be made to the hospital for those services effective July 1, 1987 as long as the hospital incurs substantially all of the costs. If the teaching hospital does not incur the cost of the training program, the services of licensed residents furnished in nonprovider settings continue to be covered as physician services.

Section 1861(v)(1)(A) of the Act defines reasonable costs as the cost actually incurred, excluding any cost unnecessary in the efficient delivery of needed services to Medicare beneficiaries. Following this principle, we pay providers for costs related to care of their patients. Generally, we have not recognized the costs incurred by hospitals for services that are furnished to other than the hospital's patients. Under payment under a reasonable cost basis, we have not recognized the costs incurred by hospitals for time spent by residents in nonprovider settings. To apply this policy to costs incurred for services furnished in other provider settings, however, would mean that Medicare would make no payment for resident services that are furnished to Medicare beneficiaries at the other provider because, unlike the situation where the services are furnished in a nonprovider setting, the services cannot be paid for on a reasonable charge basis and the other provider cannot claim payment for costs it did not incur. Moreover, this policy would produce anomalous results in situations where a hospital that exchanges residents on a one-for-one

basis pays the salary of specific residents throughout their rotations rather than a portion of the salary of each resident that rotates to the hospital. If the costs incurred for these residents while on rotation to other hospitals were not allowable, we would be recognizing only a portion of the costs the hospital incurred even though Medicare beneficiaries in that hospital received the same benefit that they would have if there had been no rotations. We do not believe it would be appropriate for these financial arrangements, which are undertaken primarily for administrative convenience, to affect the amount of program payment. Finally, it is reasonable to assume that in providing payment effective July 1, 1987 for the costs teaching hospitals incur for services furnished in nonprovider settings, the Congress understood that payment was already made for the costs teaching hospitals incur for resident services furnished in other provider settings; otherwise, the Congress would have provided for payment in these situations since it would be inconsistent to make payments only for services furnished in the nonprovider setting.

Based on these considerations, we are taking this opportunity to clarify that in determining the reasonable costs of GME included in the GME based period, the net costs incurred by a teaching hospital for services furnished by residents in other provider settings may be included in the hospital's allowable costs. However, in determining the total number of resident FTEs in both the GME base year and in the payment year, only the time the resident spent at the teaching hospital will be counted. This is because no resident may be counted as more than 1.0 FTE and the other hospital is required to include the portion of time the resident spent at its facility in its FTE count consistent with § 413.86(f).

Example 1

Hospital A and Hospital B have an arrangement whereby residents in Hospital A's approved graduate medical education programs rotate as part of their training through Hospital B. Hospital A incurs $5,000,000 in costs for the 20 residents in its program. Hospital A rotates 5 FTE residents through Hospital B and Hospital B pays Hospital A $75,000 for the costs incurred by Hospital A. The per resident amount for Hospital A would be determined by dividing the 15 FTE residents working in Hospital A into the net costs ($5,000,000 − $75,000). Hospital B's per resident amount is determined by dividing the 5 FTE residents working in Hospital B into the costs incurred by Hospital B ($75,000). Hospital A's per resident amount would be $28,333.333 and Hospital B's per resident amount would be $15,000.

Example 2

Hospital A and Hospital B have approved graduate medical education programs. Hospital A and Hospital B have an arrangement whereby each hospital rotates residents through the other hospital and neither hospital pays the other for the rotating residents. Hospital A has 25 FTE residents of which 10 FTE rotate through Hospital B and Hospital B has 15 FTE residents of which 5 FTE rotate through Hospital A. Hospital A incurs $600,000 in costs for its program and Hospital B incurs $500,000 in costs for its program. Hospital A's per resident amount is determined by dividing the number of FTE residents working in its hospital (25—10+5) into its costs ($600,000). Hospital B's per resident amount is determined by dividing the number of FTE residents working in its hospital (15—5+10) into its costs ($500,000). Hospital A's per resident amount would be $30,000 and Hospital B's per resident amount would be $25,000).

C. Update Factor Changes for Direct Graduate Medical Education Per Resident Amounts

Section 1886(h)(2)(D) of the Act provides that the GME per resident amounts shall be updated annually by the percentage increase in the Consumer Price Index for All Urban Consumers (United States city average). The following tables (Tables 1a and 1b) provide update factors to be applied to the GME per resident amounts for the specified cost reporting periods. Update factors for previous cost reportng periods were provided in the September 29, 1989 GME final rule at 54 FR 40319. Future changes in the update factors will be published as revisions to the Provider Reimbursement Manual (HCFA Pub. 15-1).

Table 1a.—Update Factors for Cost Reporting Periods Beginning On or After July 1, 1988 and Before January 1, 1990.

Cost reporting period	Update factor [1]
07/1/88 to 06/30/89	1.0467
08/1/88 to 07/31/89	1.0483
09/1/88 to 08/31/89	1.0498
10/1/88 to 09/30/89	1.0512
11/1/88 to 10/31/89	1.0536
12/1/88 to 11/30/89	1.0517
01/1/89 to 12/31/89	1.0498
02/1/89 to 01/31/90	1.0471
03/1/89 to 02/28/90	1.0434
04/1/89 to 03/31/90	1.0449
05/1/89 to 04/30/90	1.0466
06/1/89 to 05/31/90	1.0465
07/1/89 to 06/30/90	1.0520
08/1/89 to 07/31/90	1.0526
09/1/89 to 08/31/90	1.0523
10/1/89 to 09/30/90	1.0471
11/1/89 to 10/31/90	1.0436
12/1/89 to 11/30/90	1.0467

[1] These update factors account for the 12-month average change in the CPI-U ending at the midpoint of the specified cost reporting period.

Table 1b.—Projected Update Factors for Cost Reporting Periods Beginning On or After January 1, 1990 and Before July 1, 1991

Cost reporting period	Update factor [1]
01/1/90 to 12/31/90	1.042
02/1/90 to 01/31/91	1.042
03/1/90 to 02/28/91	1.042
04/1/91 to 03/31/91	1.041
05/1/90 to 04/30/91	1.041
06/1/90 to 05/31/91	1.041
07/1/90 to 06/30/91	1.042
08/1/90 to 07/31/91	1.042
09/1/90 to 08/31/91	1.042
10/1/90 to 09/30/91	1.043
11/1/90 to 10/31/91	1.043
12/1/90 to 11/30/91	1.043
01/1/91 to 12/31/91	1.043
02/1/91 to 01/31/92	1.043
03/1/91 to 02/29/92	1.043
04/1/91 to 03/31/92	1.044
05/1/91 to 04/30/92	1.044
06/1/91 to 05/31/92	1.044

[1] The projected update factor for a specified cost reporting period is to be used for interim payment purposes only and is applied to the prior period's per resident amount. The actual update factor will be published in the Provider Reimbursement Manual (HCFA Pub. 15-1) and is to be used for final settlement purposes. The projected update factors are based on estimates prepared for HCFA by Data Resources, Inc. on a quarterly basis. The forecasted percent of changes in the CPI-U over the previous 12-month period serve as the proxy behind the All Other Nonlabor Intensive portion of the hospital input price index used in the Medicare prospective payment system.

VIII. Other ProPAC Recommendations

As required by law, we reviewed the March 1, 1990 report submitted by ProPAC and gave its recommendations careful consideration in conjunction with the proposals set forth in the proposed rule. We also responded to the individual recommendations in the proposed rule. The comments we received on the treatment of the ProPAC recommendations are set forth below along with our responses to those comments. However, if we received no comments from the public concerning a particular ProPAC recommendation or our response to that recommendation, we have not repeated the recommendation and response in the discussion below. Recommendations 1 and 3 through 5 concerning the update factors are discussed in appendix C of the final rule. Recommendations 2 and 6 concerning the market basket are discussed in section V of this preamble. Recommendation 8 concerning improving the area wage index is discussed in section IV of this preamble. Recommendation 12 concerning reassignment of patients with Guillain-Barre syndrome is discussed in section III.B of this preamble.

A. Adjusting the Prospective Payment Formula Indirect Medical Education Adjustment (Recommendation 7)

Recommendation: The Secretary should seek legislation to reduce the indirect medical education adjustment from its current level of 7.7 percent to 6.8 percent for FY 1991. This reduction should be implemented in a budget neutral fashion, with the savings returned to all hospitals through corresponding increases in the standardized amounts.

Response in the Proposed Rule: We agree that the indirect medical education adjustment should be reduced from its current level. The President's Budget for FY 1991 includes a proposal to set the adjustment at approximately 4.05 percent. This figure represents our estimate of the actual impact of the indirect effects of teaching activity on hospital costs. Analyses done by the Congressional Budget Office and the General Accounting Office as well as ProPAC have also estimated these effects at levels substantially below 7.7 percent. ProPAC's most recent estimate is below our 4.05 percent figure. That is, ProPAC estimates that for every 0.1 increase in the ratio of interns and residents to beds, Medicare cost per case for teaching hospitals is 3.2 percent higher than the cost for nonteaching hospitals.

ProPAC attributes some of the decline in the indirect costs of teaching activity from previous estimates to the improvements made in measuring hospital case-mix. The cost associated with the higher overall severity of illness among patients admitted to teaching hospitals is widely believed to be partially reflected in the indirect medical education adjustment. As refinements have been made to the DRGs that reflect more closely the resources necessary to treat certain patients, more of the variation in costs between teaching and nonteaching hospitals is measured by case-mix rather than the indirect medical education adjustment.

We disagree, however, with that aspect of ProPAC's recommendation that would initially reduce the adjustment to 6.8 percent for FY 1991. This would constitute the first of a proposed 5-year phase-out of the difference between the current 7.7 percent and ProPAC's estimated 3.2 percent. The justification given for the gradual reduction is that the total margins for major teaching hospitals are significantly lower than for other teaching and nonteaching hospitals, and, therefore, they may be adversely affected by a precipitous drop in the adjustment.

Teaching hospitals have consistently had much higher Medicare operating margins than nonteaching hospitals. In FY 1988, the most recent year for which data are available, major teaching hospitals had average Medicare operating margins of 14.3 percent while minor teaching hospitals had Medicare operating margins of 3.7 percent. These Medicare profit margins are significantly higher than the average Medicare operating margin for all hospitals (2.2 percent). These data clearly indicate that teaching hospitals are doing better under Medicare than other classes of hospitals and, more importantly, that Medicare payments are subsidizing teaching hospitals.

We recognize that teaching hospitals tend to have lower total margins than other hospitals. However, prospective payment rates and adjustments to those rates are based on estimates of the resources required to furnish services to Medicare patients. They are not based on operating margins or any other measure of financial status. Moreover, we do not believe that Medicare payments should be used to compensate hospitals for losses they sustain in their non-Medicare operation. Therefore, we believe it is appropriate, for Medicare payment purposes, to reduce the adjustment immediately to a level that more closely reflects the actual impact of teaching activities on hospital costs. We note that the 4.05 percent factor is higher than ProPAC's 3.2 percent estimate. Further, because payments to other hospitals are adequate, the money saved through reducing the indirect medical education adjustment should be retained as budget savings, rather than redistributed among all hospitals as proposed by ProPAC.

Comment: Several commenters objected to our recommendation that the teaching adjustment factor be lowered to 4.05 percent. The commenters believe that the relatively lower average total margins of teaching hospitals argue against lowering the adjustment, even though their Medicare operating margins are considerably higher than nonteaching hospitals. As justification for its proposal for a gradual reduction in the adjustment, ProPAC noted the threat to access to care that would arise if major teaching hospitals were to close or reduce their services.

Response: We believe that lowering the teaching adjustment to 4.05 percent as proposed in the President's budget for FY 1991 is justified, based on the results of the analyses noted in the proposed rule. The fact that teaching hospitals have higher Medicare operating margins than other hospitals lends support to the findings that a 7.7 percent teaching adjustment is too high. While we share ProPAC's concern about the threat to access if teaching hospitals are forced to curtail services or close outright, we do not agree with ProPAC's implication that a teaching adjustment of 4.05 percent effective for FY 1991 would have such an effect. Teaching hospitals have successfully responded to the incentives of the prospective payment system in the past and we assume that, if faced with lower Medicare revenues, they will take action to improve efficiency and control increases in their operating costs.

We continue to hold the view that Medicare payments should not be used to compensate hospitals for their losses in non-Medicare operations. The IME adjustment was intended to compensate hospitals for legitimate expenses involved in the postgraduate medical education of physicians which the Medicare program has historically supported. Expanding the basis for this adjustment beyond the costs associated with graduate medical education would create new financial responsibilities for Medicare, the ramifications of which go well beyond this specific adjustment.

Comment: One commenter indicated that we did not address the limitations in the DRG system cited by Congress when discussing the need for an IME adjustment in the original prospective payment system legislation.

Response: We disagree with this comment. We note that, in the preamble to the proposed rule, we indicated that one of the reasons for the smaller estimates of the effects of teaching on hospital costs is the refinement to the DRGs so that they more closely reflect the variations in costs associated with differences in severity of illness. We believe that as the DRGs and other adjustments to the prospective payment system are refined to account for more of the costs previously attributable to graduate medical education programs, it is appropriate to lower the level of the IME adjustment.

Comment: One commenter stated that our justification for the proposed decrease in the level of the IME adjustment was our own study showing higher Medicare operating margins for teaching hospitals than nonteaching hospitals. This commenter went on to write that his hospital's 1989 Medicare operating margin was negative.

Response: While we have expressed our concern that the system not result in undue financial distress among teaching hospitals that would restrict beneficiary

access, we would also point out that the prospective payment system was designed to compel hospitals to become more efficient by basing payment rates on average standardized costs. As a result, some hospitals' costs fall above the average, and others below. It is assumed that efficiently operated hospitals will, over period of time, at least maintain their costs at an average level, thus ensuring that their costs of treating Medicare patients will be met.

Comment: One commenter believes that our emphasis on Medicare operating margins as opposed to total margins does not reflect the Medicare utilization rates in teaching hospitals or the larger portion of resources consumed by an aging, sicker population. This commenter went on to state that the consideration of total operating margins should be valid in assessing teaching hospital needs, as capital needs that are in excess of funded depreciation are also resources required to furnish services to Medicare patients.

Response: These arguments are not persuasive in light of the fact that teaching hospitals' Medicare operating margins indicate that, on average, their Medicare payments exceed costs by a margin far beyond that of nonteaching hospitals. Therefore, it is counterintuitive to claim that high Medicare utilization is the source of low total margins for teaching hospitals.

B. Improving Medical Record Coding, Reporting, and DRG Assignment (Recommendation 10)

Recommendation: The Secretary should continue to improve the ICD-9-CM coding system to allow for more accurate clinical reporting. ProPAC continues to support a more timely, systematic, and consultative approach to the consideration of new ICD-9-CM codes and urges that improvements made to ICD-9-CM be carried forward into ICD-10. In addition, the Secretary should revise the Uniform Billing Form (UB-82) to allow reporting of 10 diagnosis codes and 10 procedure codes.

Response in the Proposed Rule: As discussed in detail above in section III.B.9 of this preamble, the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Coordination and Maintenance Committee is a Federal interdepartmental committee charged with the mission of maintaining and updating the ICD-9-CM. The Committee is co-chaired by the National Center for Health Statistics (NCHS) and HCFA. Membership of the Committee is comprised of representatives from Federal agencies who actively use the ICD-9-CM in their programs (the Public Health Service, HCFA, the Department of Veterans' Affairs, and the Department of Defense). Contrary to ProPAC's statement in its report, the American Hospital Association (AHA) is not represented on the Committee.

During each Federal fiscal year, the Committee holds three public meetings during which coding changes are discussed. Meetings of the Committee are open to the public and the public is invited and encouraged to participate in the process through submission of agenda items and active participation in the public meetings. We have requested that agenda items be submitted for consideration at least 2 months prior to the scheduled meeting. At least 1 month prior to each meeting, an announcement of the meeting date, time, place, and agenda is made in the **Federal Register**. In addition, a mailing list of interested parties is maintained so that copies of the meeting announcements may be individually forwarded. Summaries of the meetings are also mailed out to those on the mailing list.

Each agenda item is fully discussed at the public meetings where all attendees are encouraged to share their knowledge and opinions. The Committee encourages input into coding matters from representatives of recognized organizations in the coding fields, such as the American Medical Record Association (AMRA) and the AHA, as well as physicians, medical record administrators, and other members of the public. Considering the opinions expressed at the public meetings along with public correspondence received within 30 days after the meetings, the Committee formulates recommendations, which then must be approved by the agencies. The Committee's role is advisory. Final decisions are jointly made by the Director of the NCHS and the Administrator of HCFA.

Currently, there are a number of organizations and individuals that publish coding advice. The only publication endorsed by HCFA is Coding Clinic for ICD-9-CM (Coding Clinic), published by AHA for use by hospitals. Coding Clinic provides specific diagnostic information and guidelines that are helpful for determining proper diagnostic coding.

In 1985, the Editorial Advisory Board of Coding Clinic identified four organizations whose representatives have responsibility for review and approval of the contents of this publication. These four cooperating organizations are AHA, AMRA, HCFA, and NCHS. Final approval requires unanimous agreement by the cooperating parties. Physicians are consulted and attend Editorial Advisory Board meetings to discuss issues considered for publication. The physicians provide advice and recommendations on certain classification needs or interests. Subscriptions for Coding Clinic may be ordered by writing to the following address: American Hospital Association, Division of Quality Control Management, 840 N. Lake Shore Drive, Chicago, IL 60611.

The subscription rate is $85.00 per year for AHA members and $135.00 for nonmembers. Refer to publication ISSN 0742-9800.

The World Health Organization (WHO) revises ICD on a regular basis to describe current medical practice more accurately. When WHO recently began revising ICD-9 in preparation for publication of ICD-10, they secured a copyright on ICD-10. This would have severely limited the Committee's ability to make modifications or adaptations appropriate for use in the United States. The Clinical Modification was made to ICD-9 to include extensive detail in many disease categories for recording exact morbidity data.

Because ICD-9-CM is the basis of classifying patients for the prospective payment system, HCFA recognized the need to have the flexibility to make clinical modifications to ICD-10. HCFA officials negotiated a copyright agreement with WHO officials so that the Federal Government is authorized to make any changes necessary in order to use the system within the jurisdiction of the United States without being in violation of the copyright. The agreement clearly delineates all areas covered by the statement.

NCHS has the lead responsibility for reviewing ICD-10 and developing the mortality guidelines. NCHS and HCFA will be jointly reviewing ICD-10 from the morbidity application. There will be a careful review of ICD-10 to determine the impact on the prospective payment system. HCFA has already begun the initial planning for implementation of ICD-10.

The Committee will continue to play a vital role in coding issues when ICD-10 is implemented. We anticipate that the system that has been in place for revisions and modifications to ICD-9-CM will facilitate ICD-10 modifications as well.

As always, we rely on public scrutiny and response to react to coding issues most effectively. It is mutually beneficial to HCFA and the public when the public actively participates and responds to coding concerns. Suggestions or comments on ICD-9-CM should be sent

to the addresses set forth above in section III.B.9 of this preamble.

With regard to the suggestion that the diagnosis and procedure code fields on the UB-82 be expanded, we stated that we intended to implement a revised form that allows the reporting of 10 codes in each field for use in reporting discharges occurring on or after October 1, 1990. We agree with ProPAC that this information is necessary to ensure complete medical information reporting.

Comment: We received several comments concerning our announcement of the expansion of the UB-82 to include the reporting of up to ten diagnoses and ten procedures. Although many of these commenters were supportive of the revision and believe that it would improve the overall accuracy of the data reported, they were virtually unanimous in their request for delayed implementation of the expansion. Based on their previous experience with this type of change, the commenters believe that hospitals need at least 6 months after the details of the bill changes are announced to change their computer systems to collect and process more codes. Some commenters were also concerned with our intention to use the "Remarks" section of the form for the increased coding requirement. They stated that many hospitals already use this section for other information and that the expanded reporting of codes should not be effective until the UB-82 form is revised to accept the data. In addition, commenters requested that before the expansion is implemented, HCFA should do some analysis of the need for the full expansion to 10 codes.

Response: Based upon these comments and our own analysis of the situation, we have decided to delay implementation of an expansion of the UB-82 to accept additional diagnosis and procedure codes until October 1, 1991. During the next year, we intend to conduct further analysis of the number of diagnosis and procedure codes that are necessary to improve our ability to make accurate and valid changes in the DRG classification system. We will also continue to work with the National Uniform Bill Committee on revising the UB-82 to allow specific space for increased code reporting. We will announce our decision on the numbers of codes in time for hospitals to complete the necessary system changes by October 1, 1991.

IX. Other Required Information

A. Effective Dates

The effective date of this final rule (including the addendum and appendixes) is October 1, 1990. However, the changes we are making to § 412.118 concerning the count of full-time equivalent residents apply to cost reporting periods beginning on or after July 1, 1991.

B. Paperwork Reduction Act

This final rule does not impose information collection requirements. Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501-3511).

List of Subjects

42 CFR Part 412

Health facilities, Medicare, Reporting and recordkeeping requirements.

42 CFR Part 413

Health facilities, Kidney diseases, Medicare, Reporting and recordkeeping requirements.

42 CFR chapter IV is amended as set forth below:

CHAPTER IV—HEALTH CARE FINANCING ADMINISTRATION, DEPARTMENT OF HEALTH AND HUMAN SERVICES

SUBCHAPTER B—MEDICARE PROGRAM

I. Part 412 is amended as follows:

PART 412—PROSPECTIVE PAYMENT SYSTEM FOR INPATIENT HOSPITAL SERVICES

A. The authority citation for part 412 is revised to read as follows:

Authority: Sections 1102, 1815(e), 1871, and 1886 of the Social Security Act (42 U.S.C. 1302, 1395g(e), 1394hh, and 1394ww).

B. Subpart A is amended as follows:

Subpart A—General Provisions

1. In § 412.1, paragraph (a) is revised to read as follows:

§ 412.1 Scope of part.

(a) *Purpose.* This part implements section 1886(d) of the Act by establishing a prospective payment system for inpatient hospital services furnished to Medicare beneficiaries in cost reporting periods beginning on or after October 1, 1983. Under the prospective payment system, payment for the operating costs of inpatient hospital services furnished by hospitals subject to the system (generally, short-term, acute-care hospitals) is made on the basis of prospectively determined rates and applied on a per discharge basis. Payment for other costs related to in-patient hospital services (capital-related costs, organ acquisition costs incurred by hospitals with approved organ transplantation centers, and direct costs of medical education) is made on a reasonable cost basis. Additional payments are made for outlier cases, bad debts, indirect medical education costs, and for serving a disproportionate share of low-income patients. Under the prospective payment system, a hospital may keep the difference between its prospective payment rate and its operating costs incurred in furnishing inpatient services, and is at risk for operating costs that exceed its payment rate.

* * * * *

2. In § 412.2, the introductory text in paragraph (d) is republished and paragraph (d)(4) is revised to read as follows:

§ 412.2 Basis of payment.

* * * * *

(d) *Excluded costs.* The following inpatient hospital costs are excluded from the prospective payment amounts and paid on a reasonable cost basis:

* * * * *

(4) Heart, kidney, and liver acquisition costs incurred by approved transplantation centers.

* * * * *

C. In subpart B, § 412.23, the introductory text is republished; paragraphs (f) and (g) are redesignated as paragraphs (g) and (h), respectively; and a new paragraph (f) is added to read as follows:

Subpart B—Hospital Services Subject to and Excluded From the Prospective Payment System

§ 412.23 Excluded hospitals: Classifications.

Hospitals that meet the requirements for the classifications set forth in this section may not be reimbursed under the prospective payment system.

* * * * *

(f) *Cancer hospitals.* If a hospital meets the following criteria, it is classified as a cancer hospital and is excluded from the prospective payment system beginning with its first cost reporting period beginning on or after October 1, 1989, except that a hospital classified after December 19, 1989 is excluded beginning with its first cost reporting period beginning after the date of its classification:

(1) It was recognized as a comprehensive cancer center or clinical cancer research center by the National Cancer Institute of the National Institutes of Health as of April 20, 1983.

(2) It is classified on or before December 31, 1990, or, if on December 19, 1989, the hospital was located in a

State operating a demonstration project under section 1814(b) of the Act, the classification is made on or before December 31, 1991.

(3) It demonstrates that the entire facility is organized primarily for treatment of and research on cancer (that is, the facility is not a subunit of an acute general hospital or university-based medical center).

(4) It shows that at least 50 percent of its total discharges have a principal diagnosis that reflects a finding of neoplastic disease. (The principal diagnosis for this purpose is defined as the condition established after study to be chiefly responsible for occasioning the admission of the patient to the hospital. For the purposes of meeting this definition, only discharges with ICD-9-CM principal diagnosis codes of 140 through 239, V58.0, V58.1, V66.1, V66.2, or 990 will be considered to reflect neoplastic disease.)

* * * * *

D. In subpart D, § 412.63(l), is revised to read as follows:

Subpart D—Basic Methodology for Determining Federal Prospective Payment Rates

§ 412.63 Federal rates for fiscal years after Federal fiscal year 1984.

* * * * *

(l) *Adjusting for different area wage levels.* (1) HCFA adjusts the proportion (as estimated by HCFA from time to time) of Federal rates computed under paragraph (j) of this section that are attributable to wages and labor-related costs for area differences in hospital wage levels by a factor (established by HCFA based on survey data) reflecting the relative level of hospital wages and wage-related costs in the geographic area (that is, urban or rural area as determined under the provisions of paragraph (b) of this section) of the hospital compared to the national average level of hospital wages and wage-related costs.

(2) If an error is discovered in the survey data that results in a change to the wage index value for an area, the revised wage index value is effective prospectively from the date the change to the wage index is made.

(3) Revisions to the wage index resulting from midyear corrections to the wage index values are incorporated in the wage index values for other areas at the beginning of the next Federal fiscal year.

(4) The effect on program payments of midyear corrections to the wage index values is taken into account in establishing the standardized amounts for the following Federal fiscal year.

E. In subpart E, § 412.75, paragraphs (a), (b), and (f) are revised and new paragraphs (g) and (h) are added to read as follows:

Subpart E—Determination of Transition Period Payment Rates

§ 412.75 Determination of the hospital-specific rate based on a Federal fiscal year 1987 base period.

(a) *Base-period costs*—(1) *General rule.* Except as provided in paragraph (a)(2) of this section, for each hospital, the intermediary determines the hospital's Medicare part A allowable inpatient operating costs, as described in § 412.2(c), for the 12-month or longer cost reporting period ending on or after September 30, 1987 and before September 30, 1988.

(2) *Exceptions.* (i) If the hospital's last cost reporting period ending before September 30, 1988 is for less than 12 months, the base period is the hospital's most recent 12-month or longer cost reporting period ending before the short period report.

(ii) If the hospital does not have a cost reporting period ending on or after September 30, 1987 and before September 30, 1988 and does have a cost reporting period beginning on or after October 1, 1986 and before October 1, 1987, that cost reporting period is the base period unless the cost reporting period is for less than 12 months. In that case, the base period is the hospital's most recent 12-month or longer cost reporting period ending before the short cost reporting period.

(b) *Costs on a per discharge basis.* The intermediary determines the hospital's average base-period operating cost per discharge by dividing the total operating costs by the number of discharges in the base period.

For purposes of this section, a transfer as defined in § 412.4(b) is consdered to be a discharge.

* * * * *

(f) *Notice of hospital-specific rate.* The intermediary furnishes the hospital a notice of its hospital-specific rate, which contains a statment of the hospital's Medicare part A allowable inpatient operating costs, number of Medicare discharges, and case-mix index adjustment factor used to determine the hospital's cost per discharge for the Federal fiscal year 1987 base period.

(g) *Right to administrative and judicial review.* An intermediary's determination of the hospital-specific rate for a hospital is subject to administrative and judicial review. Review is available to a hospital upon receipt of the notice of the hospital-specific rate. This notice is treated as a final intermediary determination of the amount of program reimbursement for purposes of subpart R of part 405 of this chapter, governing provider reimbursement determinations and appeals.

(h) *Modification of hospital-specific rate.* (1) The intermediary recalculates the hospital-specific rate to reflect the following:

(i) Any modifications that are determined as a result of administrative or judicial review of the hospital-specific rate determinations; or

(ii) Any additional costs that are recognized as allowable costs for the hospital's base period as a result of administrative or judicial review of the base-period notice of amount of program reimbursement.

(2) With respect to either the hospital-specific rate determination or the amount of program reimbursement determination, the actions taken on administrative or judicial review that provide a basis for recalculations of the hospital-specific rate include the following:

(i) A reopening and revision of the hospital's base-period notice of amount of program reimbursement under §§ 405.1885 through 405.1889 of this chapter.

(ii) A prehearing order or finding issued during the provider payment appeals process by the appropriate reviewing authority under § 405.1821 or § 405.1853 of this chapter that resolved a matter at issue in the hospital's base-period notice of amount of program reimbursement.

(iii) An affirmation, modification, or reversal of a Provider Reimbursement Review Board decision by the Administrator of HCFA under § 45.1875 of this chapter that resolved a matter at issue in the hospital's base-period notice of amount of program reimbursement.

(iv) An administrative or judicial review decision under §§ 405.1831, 405.1871, or 405.1877 of this chapter that is final and no longer subject to review under applicable law or regulations by a higher reviewing authority, and that resolved a matter at issue in the hospital's base-period notice of amount of program reimbursement.

(v) A final, nonappealable court judgment relating to the base-period costs.

(3) The adjustments to the hospital-specific rate made under paragraph (h)(1) and (2) of this section are effective retroactively to the time of the intermediary's initial determination of the rate.

F. Subpart G is amended as follows:

Subpart G—Special Treatment of Certain Facilities

§ 412.90 [Amended]

1. In § 412.90, paragraph (b) is removed; and paragraphs (c) through (i) are redesignated as paragraph (b) through (h).

2. In § 412.92, the introductory text of paragraph (a) is republished; a new paragraph (a)(4) is added; and paragraphs (f) and (g) are removed.

§ 412.92 Special treatment: Sole community hospitals.

(a) *Criteria for classification as a sole community hospital.* HCFA classifies a hospital as a sole community hospital if it is located in a rural area (as defined in § 412.63(b)) and meets one of the following conditions:

* * * * *

(4) Because of distance, posted speed limits, and predictable weather conditions, the travel time between the hospital and the nearest like hospital is at least 45 minutes.

* * * * *

§ 412.94 [Removed]

3. Section 412.94 is removed.

4. In § 412.96, paragraph (f)(3) is removed; paragraphs (g) and (h) are redesignated as paragraphs (h) and (i), respectively; and a new paragraph (g) is added to read as follows:

§ 412.96 Special treatment: Referral centers.

* * * * *

(g) *Cancellation of referral center status*—(1) *General rule.* Referral center status can be cancelled by HCFA under the criteria in paragraph (g)(2) of this section or by the hospital under the criteria in paragraph (g)(3) of this section.

(2) *HCFA cancellation of referral center status.* If a hospital does not meet either of the retention criterion in paragraph (f)(2) of this section and no longer qualifies for a referral center adjustment, HCFA discontinues the adjustment beginning on the first day of the hospital's next cost reporting period beginning on or after October 1, 1992.

(3) *Hospital cancellation of referral center status.* (i) A hospital may at any time request cancellation of its status as a referral center and be paid prospective payments per discharge based on the applicable rural rate as determined in accordance with § 412.63 as adjusted by the hospital's area wage index value.

(ii) The cancellation becomes effective no later than 30 days after the date the hospital submits its request.

(iii) If a hospital requests that its referral center status be cancelled, it may not be reclassified as a referral center unless it meets the qualifying criteria set forth in paragraph (a) of this section in effect at the time it reapplies.

* * * * *

5. In § 412.108, the introductory text in paragraph (a)(1) is republished; paragraph (a)(1)(iii) is revised; a new paragraph (a)(1)(iv) is added; and paragraph (a)(2) is revised to read as follows:

§ 412.108 Special treatment: Medicare-dependent, small rural hospitals.

(a) *Criteria for classification as a Medicare-dependent, small rural hospital*—(1) *General considerations.* For cost reporting periods beginning on or after April 1, 1990 and ending before April 1, 1993, a hospital is classified as a Medicare-dependent, small rural hospital if it is located in a rural area (as defined in § 412.63(b)) and meets all the following conditions:

* * * * *

(iii) At least 60 percent of the hospital's inpatient days or discharges were attributable to individuals receiving Medicare part A benefits during the hospital's cost reporting period as follows, subject to the provisions of paragraph (a)(1)(iv) of this section:

(A) The hospital's cost reporting period ending on or after September 30, 1987 and before September 30, 1988.

(B) If the hospital does not have a cost reporting period that meets the criterion set forth in paragraph (a)(1)(iii)(A) of this section, the hospital's cost reporting period beginning on or after October 1, 1986 and before October 1, 1987.

(iv) If the cost reporting period determined under paragraph (a)(1)(iii) of this section is for less than 12 months, the hospital's most recent 12-month or longer cost reporting period before the short period is used.

(2) *Counting days and discharges.* In counting inpatient days and discharges for purposes of meeting the criteria in paragraph (a)(1)(iii) of this section, only days and discharges from acute care inpatient hospital stays are counted (including days and discharges from swing beds when used for acute care inpatient hospital services), but not including days and discharges from distinct part units excluded from the prospective payment system under §§ 412.25 through 412.32 or from newborn nursery units.

For purposes of this section, a transfer as defined in § 412.4(b) is considered to be a discharge.

* * * * *

G. Subpart H is amended as follows:

Subpart H—Payments to Hospitals Under the Prospective Payment System

1. In § 412.113, paragraph (d) is revised to read as follows:

§ 412.113 Payments determined on a reasonable cost basis.

* * * * *

(d) *Heart, kidney, and liver acquisition costs incurred by hospitals with approved transplantation centers.* Payment for heart, kidney, and liver acquisition costs incurred by hospitals with approved transplantation centers is made on a reasonable cost basis.

2. In § 412.118, the term "interns and residents" is changed to "residents" wherever it appears; paragraph (h) is removed; and paragraphs (f) and (g) are revised to read as follows:

§ 412.118 Determination of indirect medical education adjustment.

* * * * *

(f) *Count of residents for cost reporting periods beginning before July 1, 1991.*

For cost reporting periods beginning before July 1, 1991, in order to have residents included in the count under paragraph (a)(1) of this section, the following requirements must be met:

(1) The residents must be enrolled in a teaching program approved under § 413.85 of this chapter (excluding those employed by the hospital, but furnishing services at another site).

(2) The hospital must submit an annual report to its fiscal intermediary. The report must include the following information:

(i) A listing, by specialty, of all residents assigned to the hospital and providing services to the hospital on September 1 of that year. If September 1 falls on a weekend or a Federal holiday, the next business day is used for purposes of the count of residents. For cost reporting periods beginning on or after October 1, 1984 and before July 1, 1985, the hospital must also report this information for April 15, 1985.

(ii) The social security number of each resident.

(iii) The hospital unit or department to which each resident is assigned on the day of the count.

(3) No resident will be counted as more than one full-time employee on the date counted, reagardless of the number of hospitals in which he or she is providing services.

(4) Fiscal intermediaries must verify the correct count of residents and may

review the hospital's entire cost reporting period.

(5) Residents who are assigned to a setting other than the inpatient or outpatient department of the hospital (such as a freestanding family practice center or an excluded distinct part hospital unit) on the day that the count of interns and residents (as described in paragraph (f)(2)(i) of this section) is made are not counted as full-time equivalents. Only the percentage of time that these residents spend in the portion of the hospital subject to the prospective payment system or in the outpatient department of the hospital on the day the count is made is used to determine the indirect medical education adjustment.

(6) Residents in anesthesiology who are employed to replace anesthetists are not counted as full-time equivalents.

(7) Based on its review of a hospital's documentation concerning the hospital's count of interns and residents under this section, the intermediary may adjust the resident-to-bed ratio for purposes of the final indirect medical education payment.

(g) *Determining the total number of full-time equivalent residents for cost reporting periods beginning on or after July 1, 1991.* (1) For cost reporting periods beginning on or after July 1, 1991, the count of full-time equivalent residents for the purpose of determining the indirect medical education adjustment is determined as follows:

(i) The resident must be enrolled in an approved teaching program. An approved teaching program is one that meets one of the following requirements:

(A) Is approved by one of the national organizations listed in § 405.522(a) of this chapter.

(B) May count towards certification of the participant in a specialty or subspecialty listed in the Directory of Residency Training Programs published by the American Medical Association.

(C) Is approved by the Accreditation Council for Graduate Medical Education (ACGME) as a fellowship program in geriatric medicine.

(ii) In order to be counted, the resident must be working in the portion of the hospital subject to the prospective payment system or in the outpatient department of the hospital.

(iii) Full-time equivalent status is based on the total time necessary to fill a residency slot. No individual may be counted as more than one full-time equivalent. If a resident is assigned to more than one hospital, the resident counts as a partial full-time equivalent based on the proportion of time worked in the portion of the hospital subject to the prospective payment system or the outpatient department of the hospital at the hospital to the total time worked by the resident. A part-time resident or one working in an area of the hospital other than the portion subject to the prospective payment system (such as a freestanding family practice center or an excluded distinct part hospital unit) or the outpatient department would be counted as a partial full-time equivalent based on the proportion of time worked in either a part of the hospital subject to the prospective payment system or the outpatient department, compared to the total time necessary to fill a full-time internship or residency slot.

(iv) Residents in anesthesiology who are employed to replace anesthetists are not included in the count.

(2) To include a resident in the full-time equivalent count for a particular cost reporting period, the hospital must furnish the following information. The information must be certified by an official of the hospital and, if different, an official responsible for administering the residency program.

(i) A listing, by specialty, of all residents assigned to the hospital and providing services to the hospital during the cost reporting period.

(ii) The name and social security number of each resident.

(iii) The dates the resident is assigned to the hospital.

(iv) The dates the resident is assigned to other hospitals or other freestanding providers and any nonprovider setting during the cost reporting period.

(v) The proportion of the total time necessary to fill a residency slot that the resident is working in an area of the hospital subject to the prospective payment system or the outpatient department.

(3) Fiscal intermediaries must verify the correct count of residents.

3. In § 412.120, paragraph (c) is revised to read as follows:

§ 412.120 Reductions to total payments.

* * * * *

(c) Part B payment to physician assistants—(1) *General.* HCFA reduces payments for inpatient hospital services to take into account 100 percent of the reasonable charges (before application of Medicare part B deductible and coinsurance amounts) for physician assistant services furnished to beneficiaries receiving inpatient hospital services in a part of the hospital subject to the prospective payment system if the hospital employs the physician assistant or otherwise pays for the physician assistant.

(2) *Exception.* A sole community hospital or Medicare-dependent, small rural hospital paid based on its FY 1987 hospital-specific rate as determined under § 412.75 is not subject to the offset for physician assistant services in paragraph (c)(1) of this section.

II. Part 413 is amended as follows:

PART 413—PRINCIPLES OF REASONABLE COST OF REIMBURSEMENT; PAYMENT FOR END-STAGE RENAL DISEASE SERVICES

A. The authority citation for part 413 is revised to read as follows:

Authority: Sec. 1102, 1814(b), 1815, 1833 (a) and (i), 1861(v), 1871, 1881, and 1886 of the Social Security Act (42 U.S.C. 1302, 1395f(b), 1395g, 1395l (a) and (i), 1395x(v), 1395hh, 1395rr, and 1395ww) and sec. 104(c) of Pub. L. 100-360 as amended by sec. 608(d)(3) of Pub. L. 100-485 (42 U.S.C. 1395ww (note)) and sec. 101(c) of Pub. L. 101-234 (42 U.S.C. 1395ww (note)).

B. In § 413.40, paragraphs (i)(3), (viii) and (ix) are revised to read as follows:

§ 413.40 Ceiling on rate of hospital cost increases.

* * * * *

(i) * * *

(3) * * *

(viii) *Step 8*—Determine the adjusted target rate applicable to the discharges in any cost reporting period or portion of a cost reporting period occurring on or after January 1, 1989 and before January 1, 1990 and for discharges occurring on or after January 1, 1990 when admission occurred before that date, by multiplying the updated target rate applicable to the cost reporting period or portion of the cost reporting period occurring on or after January 1, 1989 by the number computed in paragraph (i)(3)(vii) of this section

(ix) *Step 9*—Determine the appropriate target rate for all discharges when admission occurred on or after January 1, 1990, during portions of any cost reporting period occurring on and after January 1, 1990 by updating the hospitals' target rate prior to adjustment pursuant to paragraphs (i)(3)(i) through (i)(3)(viii).

(Catalog of Federal Domestic Assistance Program No. 13.773, Medicare—Hospital Insurance)

Dated: August 27, 1990.

Approved: August 28, 1990.

Louis W. Sullivan,

Secretary.

Editorial Note: The following addendum and appendixes will not appear in the Code of Federal Regulations.

Addendum—Schedule of Standardized Amounts Effective With Discharges On or After October 1, 1990 and Update Factors and Target Rate Percentages Effective With Cost Reporting Periods Beginning On or After October 1, 1990

I. Summary and Background

In this addendum, we are making changes in the amounts and factors for determining prospective payment rates for Medicare inpatient hospital services. We are also setting forth new target rate percentages for determining the rate-of-increase limits (target amounts) for hospitals and hospital units excluded from the prospective payment system.

For discharges occurring on or after October 1, 1990, except for sole community hospitals, Medicare-dependent small rural hospitals, and hospitals located in Puerto Rico, each hospital's payment per discharge under the prospective payment system will be comprised of 100 percent of the Federal national rate.

For cost reporting periods that began before April 1, 1990, sole community hospitals are paid on the basis of a rate per discharge composed of 75 percent of the hospital-specific rate and 25 percent of the applicable Federal regional rate (section 1886(d)(5)(C)(ii) of the Act). For cost reporting periods beginning on or after April 1, 1990, sole community hospitals and Medicare-dependent small rural hospitals are paid based on whichever of the following rates yields the greatest aggregate payment: The Federal national rate (subject to the regional floor for discharges occurring before October 1, 1990), the updated hospital-specific rate based on FY 1982 cost per discharge, or their updated hospital-specific rate based on FY 1987 cost per discharge. Hospitals in Puerto Rico are paid on the basis of a rate per discharge composed of 75 percent of a Puerto Rico rate and 25 percent of a national rate (section 1886(d)(9)(A) of the Act).

As discussed below in section II, we are making changes in the determination of the prospective payment rates. The changes, to be applied prospectively, will affect the calculation of the Federal rates. Section III sets forth our changes for determining the rate-of-increase limits for hospitals excluded from the prospective payment system. The tables to which we refer in the preamble to the final rule are presented at the end of this addendum in section IV.

II. Changes to Prospective Payment Rates For Hospitals for FY 1991

The basic methodology for determining prospective payment rates is set forth at § 412.63 for hospitals located outside of Puerto Rico. The basic methodology for determining the prospective payment rates for hospitals located in Puerto Rico is set forth at §§ 412.210 and 412.212. Below we discuss the manner in which we are changing some of the factors used for determining the prospective payment rates. The Federal and Puerto Rico rate changes, once issued as final, will be effective with discharges occurring on or after October 1, 1990. As required by section 1886(d)(4)(C) of the Act, we must adjust the DRG classifications and weighting factors for discharges in FY 1991.

In summary, the proposed standardized amounts set forth in Tables 1a, 1b, and 1c of section IV of this addendum were—

- Adjusted to reflect labor and nonlabor portions in accordance with the rebased market basket;
- Updated by 5.2 percent (that is, the market basket percentage increase);
- Adjusted by the revised urban and rural outlier offsets;
- Adjusted to ensure budget neutrality as provided for in sections 1886(d)(4)(C)(iii) and 1886(d)(3)(E) of the Act; and
- Adjusted to ensure budget neutrality as provided for in sections 1886(d)(4)(C)(iii) and 1886(d)(8)(D) of the Act.

A. Calculation of Adjusted Standardized Amounts

1. *Standardization of Base-Year Costs or Target Amounts.* Section 1886(d)(2)(A) of the Act required the establishment of base-year cost data containing allowable operating costs per discharge of inpatient hospital services for each hospital. The preamble to the September 1, 1983 interim final rule, (48 FR 39763) contains a detailed explanation of how base-year cost data were established in the initial development of standardized amounts for the prospective payment system and how they are used in computing the Federal rates.

Section 1886(d)(9)(B)(i) of the Act required that Medicare target amounts be determined for each hospital located in Puerto Rico for its cost reporting period beginning in FY 1987. The September 1, 1987 final rule contains a detailed explanation of how the target amounts were determined and how they are used in computing the Puerto Rico rates (52 FR 33043, 33066).

The standardized amounts are based on per discharge averages of adjusted hospital costs from a base period or, for Puerto Rico, adjusted target amounts from a base period, updated and otherwise adjusted in accordance with the provisions of section 1886(d) of the Act. Sections 1886 (d)(2)(C) and (d)(9)(B)(ii) of the Act required that the updated base-year per discharge costs and, for Puerto Rico, the updated target amounts, respectively, be standardized in order to remove from the cost data the effects of certain sources of variation in cost among hospitals. These include case mix, differences in area wage levels, cost-of-living adjustments for Alaska and Hawaii, indirect medical education costs, and payments to hospitals serving a disproportionate share of low-income patients.

Since the standardized amounts have already been adjusted for differences in case mix, wages, cost-of-living, indirect medical education costs, and payments to hospitals serving a disproportionate share of low-income patients, no additional adjustments for these factors for FY 1991 were made.

That is, the standardization adjustments reflected in the FY 1991 standardized amounts are the same as those reflected in the FY 1990 standardized amounts. However, in accordance with section V of the preamble, we are using the rebased market basket as the basis for revising the labor and nonlabor portions of the standardized amounts. Thus for each hospital, instead of the current 74.39 percent labor portion and 25.61 percent nonlabor portion, we will use 71.40 percent and 28.60 percent, respectively.

We note that the standardized amounts for Puerto Rico which were included in Table 1c of the proposed rule did not reflect this change in the labor and nonlabor portions of the standardized amounts. The standardized amounts for Puerto Rico have now been revised accordingly. That is, for each Puerto Rico hospital, instead of the current 74.39 percent labor portion and 25.61 percent nonlabor portion, we used 71.40 percent and 28.60 percent, respectively.

Sections 1886 (d)(2)(H) and (d)(3)(E) of the Act require that, in making payments under the prospective payment system, the Secretary adjust the proportion (as estimated by the Secretary from time to time) of payments that are wage-related. Since October 1, 1986, when the market basket was rebased, we have considered 74.39 percent of costs to be labor-related for purposes of the prospective payment system.

In connection with the current rebasing of the hospital market basket we have, under the authority of the applicable section of the statute cited above, re-estimated the labor-related share of the standardized amounts. Based on the relative weights described in Table 2 of section IV of this Addendum to the final rule, the labor-related portion that is subject to hospital wage index adjustments (based on wages and salaries, employee benefits, professional fees, business services, computer and data processing, blood services, postage, and all other labor-intensive services) is 71.40 percent and the nonlabor-related portion is 28.60 percent. To implement this change, effective with discharges occurring on or after October 1, 1990, we recomputed the labor-related and nonlabor-related shares of each hospital's base year cost used to establish the standardized payment amounts.

The amounts in Table 1 of section IV of this Addendum to this final rule have been recomputed to reflect the revised labor-related and nonlabor-related portions. It should be noted that, because of the revision of the labor and nonlabor portions, the labor portions of the rates published in Table 1 of the Addendum to this final rule have decreased from those currently in effect while the nonlabor portions have increased.

2. *Computing Urban and Rural Averages Within Geographic Areas.* In determining the prospective payment rates for FY 1984, section 1886(d)(2)(D) of the Act required that the average standardized amounts be determined for hospitals located in urban and rural areas of the nine census divisions and the nation. Under section 1886(d)(9)(B)(iii) of the Act, the average standardized amount per discharge for FY 1988 must be determined for hospitals located in urban and rural areas in Puerto Rico.

For cost reporting periods beginning before April 1, 1990, section 1886(d)(5)(C)(ii) of the Act specifies that a sole community hospital's Federal rate is based on 100 percent of the regional rate. Hospitals in Puerto Rico are paid a blend of 75 percent of the applicable Puerto Rico standardized amount and 25

percent of a national standardized payment amount.

Section 4002(c)(i) of the Omnibus Budget Reconciliation Act of 1987 (Pub. L. 100-203) amended section 1886(d)(3) of the Act to require the Secretary to compute three average standardized amounts for discharges occurring in a fiscal year beginning on or after October 1, 1987: One for hospitals located in rural areas; one for hospitals located in large urban areas; and one for hospitals located in other urban areas. Section 4002(b) of Public Law 100-203 amended section 1886(d)(2)(D) of the Act to define a "large urban area" as an urban area with a population of more than 1,000,000. In addition, section 4009(i) of Public Law 100-203 provides that a New England County Metropolitan Area (NECMA) with a population of more than 970,000 is classified as a large urban area. As required by section 1886(d)(2)(D) of the Act, population size is determined by the Secretary based on the latest population data published by the Bureau of the Census. Under the section, urban areas are referred to as "other urban areas."

Based on 1988 population estimates published by the Bureau of the Census, the current 46 large urban areas continue to meet the criteria to be defined as large urban areas for FY 1991. A list of those areas was set forth in the April 5, 1988 notice (at 53 FR 11138) concerning FY 1988 legislative changes that affect payment to hospitals. In addition, these areas are identified by an asterisk in Tables 4a and 4c. No additional areas were identified. Therefore, we are making no change in these areas for purposes of this final rule.

We stated in the addendum to the proposed rule that the Office of Management and Budget (OMB) may announce revised listings of the Metropolitan Statistical Area (MSA) and New England County Metropolitan Area (NECMA) designations that are used in calculating the standardized amounts. We also stated that if OMB makes the announcement before we issue the final rule, we would list the revised MSA/NECMA designations in the addendum to the final rule.

Since publication of the proposed rule, OMB has announced Yuma, Arizona, which comprises the county of Yuma, as a new MSA. Consistent with Medicare policy and our regulations at § 412.63(b)(4), the changes in designation will be effective for discharges occurring on or after October 1, 1990.

Table 1a contains the three national standardized amounts that would continue to be applicable to most hospitals. Table lb sets forth the 27 regional standardized amounts that would continue to be applicable to sole community hospitals with cost reporting periods beginning before April 1, 1990. Under section 1886(d)(9)(A)(ii) of the Act, the national standardized payment amount applicable to hospitals in Puerto Rico consists of the discharge-weighted average of the national rural standardized amount, the national large urban standardized amounts, and the national other urban standardized amount (as set forth in Table la). The national average standardized amount for Puerto Rico is set forth in Table lc. This table also includes the three standardized amounts that would be applicable to most hospitals in Puerto Rico.

3. *Updating the Average Standardized Amounts.* In accordance with section 1886(d)(3)(A) of the Act, we are updating the large urban, other urban, and rural average standardized amounts and the hospital-specific rate (which applies only to sole community and Medicare-dependent small rural hospitals) using the applicable percentage increase specified in section 1886(b)(3)(B)(i) of the Act. The percentage increase to be applied is mandated under that section of the law as the estimated percentage increase in the hospital market basket for hospitals located in all areas. The percentage change in the market basket reflects the average change in the price of goods and services purchased by hospitals to furnish inpatient care. The most recent forcasted hospital market basket increase and, thus, the applicable percentage increase for FY 1991 is 5.2 percent.

Although the update factor for FY 1991 is set by law, we were required by section 1886(e)(3)(B) of the Act to report to Congress no later than March 1, 1990 on our initial recommendation of update factors for FY 1991 for both prospective payment hospitals and hospitals excluded from the prospective payment system. For general information purposes, we published the report to Congress as appendix C of the proposed rule. Our final recommendation on the update factors (which is required by sections 1886 (e)(4) and (e)(5)(A) of the Act) is set forth as appendix C of this final rule.

4. *Other Adjustments to the Average Standardized Amounts*—a. *Rural hospitals deemed to be urban—Budget neutrality adjustment.* Section 1886(d)(8)(B) of the Act provides that certain rural hospitals are deemed urban effective with discharges occurring on or after October 1, 1988. Section 1886(d)(8)(C) of the Act specifies that the wage index for those hospitals deemed urban will be determined based on the hypothetical effect their wage data would have on the wage index of the MSA to which they are redesignated. (See section IV.F of this preamble for a further explanation.)

Section 1886(d)(8)(D) of the Act specifies two payment conditions that must be met. First, the FY 1991 urban standardized amounts are to be adjusted so as to ensure that total aggregate payments under the prospective payment system after implementation of the provisions of sections 1886(d)(8) (B) and (C) of the Act are equal to the aggregate prospective payments that would have been made absent these provisions. Second, the rural standardized amounts are to be adjusted to ensure that aggregate payments to rural hospitals not affected by these provisions neither increase nor decrease as a result of implementation of these provisions. The following adjustment factors, necessary to achieve the requisite budget neutrality constraints, were applied to the proposed standardized amounts: Urban—.99933; Rural—.99958.

The following adjustment factors were applied to the final standardized amounts: Urban—.999339; Rural—.999455.

b. *Recalibration of DRG weights and updated wage index—budget neutrality adjustment.* Section 1886(d)(4)(C)(iii) of the Act, as amended by section 6003(b) of Public Law 101-239, specifies that beginning in fiscal year 1991, the annual DRG reclassifications and recalibration of the relative weights must be made in a manner that ensures that aggregate payments to hospitals are not affected. As discussed in section III.C of the preamble to this final rule, we normalized the recalibrated DRG weights by an adjustment factor so that the average case weight after recalibration is equal to the average case weight prior to recalibration. While this adjustment is intended to ensure that recalibration does not affect total payments to hospitals, our analysis indicates that the normalization adjustment does not necessarily achieve budget neutrality with respect to aggregate payments to hospitals.

Section 1886(d)(3)(E) of the Act, as amended by section 6003(h)(6) of Public Law 101-239, specifies that the hospital wage index must be updated based on new survey data no later than October 1, 1990 and on an annual basis beginning October 1, 1993. This provision also requires that any updates or adjustments to the wage index must be made in a manner that ensures that aggregate payments to hospitals are not affected by the change in the wage index.

To comply with the requirement of section 1886(d)(4)(C)(iii) that the DRG reclassification changes and recalibration of the relative weights be budget neutral and the requirement in section 1886(d)(E) of the Act that the updated wage index be implemented in a budget neutral manner, we compared aggregate FY 1991 payments to what aggregate payments would have been if we continued to use the FY 1990 relative weights and wage index. Other than the DRG weights and the wage index, FY 1991 payment rules were used to estimate aggregate payments. Due to the interactive effect of the wage index and DRG weights on aggregate payments, we simultaneously compared the effects of changing the DRG weights and the

wage index. Based on this comparison of aggregate payments using the FY 1990 relative weights and wage index to aggregate payments using the proposed FY 1991 relative weights and wage index, we computed a proposed budget neutrality adjustment factor equal to .998207. We applied this budget neutrality adjustment factor to the proposed standardized amounts.

The budget neutrality adjustment factor which was applied to the final standardized amounts is .998637.

In addition, we are applying the same adjustment factor to the hospital-specific rates that are effective for cost reporting periods beginning on or after October 1, 1990. Unless we apply the same adjustment factor to the hospital-specific rates, we cannot meet the statutory requirement that aggregate payments neither increase nor decrease as a result of the implementation of the DRG weights and updated wage index. This is because payments to sole community hospitals and Medicare-dependent, small rural hospitals are affected by changes in the DRG weights and in the wage index.

Comment: One commenter pointed out that reclassifying and recalibrating the DRGs and updating the wage index have the effect of increasing payments to urban hospitals while reducing payments to rural hospitals. This commenter argued that refinements in the measurement of case mix or area wage variation should not cause shifts in payments between urban and rural hospitals. To prevent this differential impact, the commenter suggested that we should make separate budget neutrality adjustments for urban hospitals and for rural hospitals in connection with DRG reclassification and recalibration and updates of the wage index, rather than a single adjustment to aggregate payments for all prospective payment system hospitals.

Response: As explained in the proposed rule, the purpose of revising the DRG definitions and recalibrating the weights is to reflect changes in treatment patterns, technology, and any other factors that may change the relative use of hospital resources. Section 1886(d)(4)(C)(iii) of the Act requires that these changes be made in a budget neutral fashion so that aggregate payments are not affected.

We do not believe that Congress intended that the budget neutrality adjustment be used to eliminate the effect that changes in the DRG classification and weights have on the distribution of payments between different groups of hospitals. This distributional impact is a direct result of reported variations in the relative resource use between urban and rural hospitals. It is largely a reflection of the fact that charges for surgical and other resource-intensive procedures and technologies (new technologies that use greater resources) are increasing at a faster rate than charges for medical procedures. Since urban hospitals generally have a greater proportion of cases concentrated in the high-weighted DRGs, the introduction of a new GROUPER and weights will tend to increase the average DRG weight for these hospitals and, therefore, raise their payments under the prospective payment system. By contrast, since rural hospitals generally have a higher proportion of low-weighted cases, the average DRG weight for their mix of cases will tend to decrease relative to urban hospitals. This change in payment distribution is a natural consequence of reported shifts in the relative use of resources among hospitals.

We disagree that the budget neutrality adjustment is the appropriate vehicle by which to compensate rural hospitals for the distributional effects of case-mix change. This adjustment is intended to ensure that aggregate payments neither increase or decrease as a result of changes in the DRG definitions and weighting factors. It is not designed to eliminate the redistribution of payment that occurs as a result of reported changes in resource use.

The same reasoning applies to shifts in payments between urban and rural hospitals that occur because of proposed changes in the wage index. The purpose of updating the wage index is to achieve a more comprehensive and appropriate measurement of the relative labor costs among wage areas. We believe that the data from the 1988 wage survey are more accurate than data collected in previous years. The proposed wage index changes the distribution of payments between urban and rural hospitals primarily as a result of the different rate of change in labor costs across areas. We recognize that some of the relative change in wage indexes may result from changes in how the wage index is constructed rather than from the more recent data on wage variation. However, section 1886(d)(3)(E) of the Act explicitly requires that the wage index update be budget neutral with respect to aggregate payments. There is no indication that the purpose of the adjustment is to eliminate the differential impact of the wage index update on urban and rural hospitals.

We agree with the commenter that the distributional effects of DRG reclassification and recalibration and updates of the wage index should be taken into account as long as there are separate standardized amounts for urban and rural hospitals. However, we believe the place to account for these changes is in the update factor. In our update recommendation to Congress for FY 91, we recommend a higher update for hospitals located in rural areas than for hospitals located in large urban and other urban areas. In advocating a differential update, we specifically note that DRG reclassifications and recalibration had tended to favor urban hospitals and that the proposed wage index would reduce payments to rural hospitals relative to urban hospitals. We continue to believe that the update factor, and not the budget neutrality adjustment, is the proper mechanism for addressing these matters.

Comment: Several commenters objected to the way we applied the budget neutrality adjustment required for implementation of the new DRG weights and the updated wage index. The commenters argued that this adjustment should only be applied to the prospective payment system standardized amounts and not to the hospital-specific rates. They contended that our proposal to apply the adjustment to the hospital-specific rates goes beyond what is required by law, insofar as it would account not only for the impact of changes in the relative weights and wage index, but also for the impact of the interaction of these particular changes with other prospective payment system policy changes. The commenters recommended that to isolate the effects of the changes in the DRG weights and wage index, HCFA should compare aggregate payments using the payment policies in effect in FY 1990, varying only the wage index used in FY 1990 and FY 1991.

Response: As noted above, section 1886(d)(4)(C)(iii) of the Act, as amended by section 6003(b) of Public Law 101-239, specifies that beginning in FY 1991, the annual DRG reclassifications and recalibration of the relative weights must be made in a manner that assures that aggregate payments to hospitals are not affected. Similarly, section 1886(d)(3)(E) of the Act, as amended by section 6003(h)(6) of Public Law 101-239, specifies that the hospital wage index must be updated based on new survey data no later than October 1, 1990 and on an annual basis beginning October 1, 1993. This provision also requires that any updates or adjustments to the wage index must be made in a manner that ensures that aggregate payments to hospitals are not affected by the change in the wage index.

Both of these sections of the Act require that aggregate prospective payment system payments "in the fiscal year are not greater or less than those that would have been made in the year without such adjustments." As explained in the proposed rule, to implement this requirement we sought to ensure that aggregate payments for FY 1991 will not increase or decrease from what they would have been without the changes in the weights and the wage index. We therefore estimated what aggregate payments for FY 1991 would be if these particular changes were not made, and we compared that amount to an estimate of FY 1991 aggregate payments that incorporated these changes. Specifically, we first calculated aggregate payments using the payment policies proposed for FY 1991 yet maintaining the current DRG classifications and weights and the current wage index. We then compared this to the amount of aggregate payments calculated using proposed FY 1991 payment policies and including the proposed changes in the weights and wage index. We believe our methodology effectively isolated the impact of changes in the relative weights and the wage index and provided a proper basis for computing the budget neutrality adjustment factor.

To achieve budget neutrality, we applied this adjustment factor not only to the standardized amounts, but also to the hospital-specific rates. We continue to believe this latter step is necessary. First, it is clear that payments to sole community hospitals and Medicare-dependent, small-rural hospitals must be taken into account when calculating aggregate payments. These hospitals constitute an integral part of the prospective payment system. Second, as we explained in the proposed rule, payments to these hospitals are affected by changes in the DRG weights and in the wage index. These hospitals are paid based on whichever of the

following yields the highest aggregate payment for the cost reporting period: The Federal rate, the updated 1982 hospital-specific rate, or the updated FY 1987 hospital-specific rate. In determining payment, both the Federal rate and the hospital-specific rate are adjusted by an appropriate DRG weighting factor. Thus, payments to these hospitals are affected by changes in the relative weights, regardless of whether they are paid based on a Federal rate or a hospital-specific rate. In addition, although the changes in the wage index are applicable only to those hospitals that are paid based on the Federal rate, these changes could cause changes in the payment bases for some SCHs and MDHs. That is, depending on the size of increase or decrease in their wage index value, some hospitals that had been paid based on a hospital-specific rate would now be paid based on the Federal rate and some hospitals that had been paid based on the Federal rate would now be paid based on the hospital-specific rate. These shifts in the payment basis affect aggregate program payments and, therefore, must be taken into account by applying the budget neutrality adjustment to the hospital-specific rates. We note that the budget neutrality adjustment takes into account only the additional increases in payments to SCHs and MDHs that will result from the changes in the DRG weights and wage index. No adjustment is made for the increases resulting from the implementation of underlying change in the payment methodology for these hospitals.

If we do not adjust the hospital-specific amounts as part of achieving budget neutrality, we would have to apply a larger reduction factor to the standardized amounts. This would be inequitable to those hospitals that are paid based on the Federal rates. Therefore, we believe that to achieve budget neutrality in an equitable manner, we should apply the same adjustment factor to the hospital-specific rates that we apply to the standardized amounts.

We find unpersuasive the commenters' argument that we should not apply the budget neutrality adjustment factor to the hospital-specific rates because we would be accounting not only for the effect on aggregate payments of the changes in the DRG weights and wage index, but also for the effect of the interaction of these changes with other policy changes—namely, the change to a new payment methodology for sole community hospitals and Medicare-dependent, small rural hospitals. The commenters believe that, to avoid bringing in these interactive effects, we should compare aggregate payments using the payment policies in effect in FY 1990, varying only the relative weights and wage index used in FY 1990 and FY 1991. However, this approach of using FY 1990 payment policies would be inconsistent with the requirements of the statute. Sections 1886(d)(4)(C)(iii) and 1886(d)(3)(E) both require that aggregate payments "in the fiscal year" not be greater or less than those that would have been made "in the fiscal year" without such adjustment. The statute thus clearly contemplates looking to the year in which the new relative weights and wage index will be effective, rather than to the prior year, when establishing budget neutrality. Therefore, we believe our approach of using FY 1991 payment policies, varying only the relative weights and wage index, is more appropriate.

Moreover, we disagree with the commenters' statement that, if we used FY 1990 payment policies there would be no need to consider the effects of the new payment policies applicable to sole community hospitals and Medicare-dependent, small rural hospitals. Under the statute, these payment policies are effective for cost reporting periods beginning on or after April 1, 1990, rather than October 1, 1990 as the commenters supposed. Thus, even if we had authority to use FY 1990 policies, we would still have to take into account the interaction between the changes in the relative weights and wage index and the changes in the special payment policies for this group of hospitals. For all the reasons stated above, we believe that our application of the budget neutrality adjustment to the hospital-specific rates is required under the statute and represents sound and equitable policy under the prospective payment system system.

c. *Outliers.* Section 1886(d)(5)(A) of the Act requires that, in addition to the basic prospective payment rates, payments must be made for discharges involving day outliers and may be made for cost outliers. Section 1886(d)(3)(B) of the Act requires that the urban and rural standardized amounts be separately reduced by the proportion of estimated total DRG payments attributable to estimated outlier payments for hospitals located in urban areas and those located in rural areas. Section 1886(d)(9)(B)(iv) of the Act requires that the urban and rural standardized amounts be reduced by the proportion of estimated total payments made to hospitals in Puerto Rico attributable to estimated outlier payments.

Consequently, instead of a uniform reduction factor applying equally to all the standardized amounts, there are two separate reduction factors, one applicable to the urban national and regional standardized amounts and the other applicable to the rural national and regional standardized amounts. Furthermore, sections 1886(d)(5)(A)(iv) and 1886(d)(9)(D)(i) of the Act direct that outlier payments may not be less than five percent nor more than six percent of total payments projected to be made based on the prospective payment rates, in any year.

In the September 1, 1989 final rule, we set the outlier thresholds so as to result in estimated outlier payments (prior to consideration of the additional covered days that resulted from the elimination of a day limitation on Medicare inpatient hospital services under section 101 of the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360)) equal to 5.1 percent of total prospective payments. We also set the same outlier thresholds and offsets for the Puerto Rico prospective payment standardized amounts as we had for hospitals located outside Puerto Rico. For FY 1990, the day outlier threshold is the geometric mean length of stay for each DRG plus the lesser of 28 days or 3.0 standard deviations. The cost outlier threshold is the greater of 2.0 times the prospective payment rate for the DRG or $34,000. The outlier adjustments for FY 1990 (which were effective for discharges on or after April 1, 1990) were .943759 for the urban rates and .978500 for the rural rates.

We proposed to continue to set the outlier thresholds so as to result in estimated outlier payments equal to 5.1 percent of total prospective payments. The model that we used to determine the outlier thresholds necessary to target our desired outlier pool for FY 1991 employed FY 1989 charges. We proposed to adjust that model to take into account the effect of changes in Medicare coverage for inpatient hospital services during FY 1989 that resulted from the enactment of the Catastrophic Coverage Act of 1988 (Pub. L. 100–360). These catastrophic coverage provisions were effective with discharges occurring on or after January 1, 1989 (the second quarter of FY 1989) and were repealed by the Medicare Catastrophic Coverage Repeal Act of 1989 (Pub. L. 101–234) effective for discharges occurring on or after January 1, 1990.

We determine the outlier thresholds and establish the outlier pool based on the covered days and charges reflected in the billing data. The FY 1989 billing data that we used to determine the FY 1991 outlier payments contain 3 months of precatastrophic data (data from discharges occurring on or after October 1, 1988 and before January 1, 1989) and 9 months of data for discharges occurring while the catastrophic legislation was in effect (data from discharges occurring on or after January 1, 1989 and before October 1, 1989). For discharges occurring on or after January 1, 1989, we are not able to identify the additional days (and charges) covered under the catastrophic legislation that are no longer covered after its repeal. If we include the additional inpatient days attributable to catastrophic coverage in the model used to estimate outlier payments, we will overestimate the FY 1991 outlier payments. Since we are not able to isolate the catastrophic-covered days and charges from other covered days and charges, we have developed an adjustment to the outlier model to account for the catastrophic-covered days reflected in the billing data. The adjustment is based on a comparative analysis of outlier pools modeled on covered days and charges and on total days and charges using precatastrophic billing data and billing data for the period the catastrophic legislation was in effect.

We proposed to adjust the model used to develop the outlier thresholds by calculating an adjustment to the 5.1 percent outlier pool payment target solely for purposes of estimating the thresholds. By adjusting the payment target, we eliminate the impact that the changes in coverage that occurred in FY 1989 would have had on the computation of the outlier thresholds. To accomplish this, we calculated, for each quarter in FY 1989, the ratio of outlier payments based on covered days and covered charges to payments based on total days and total charges. We arrived at the adjustment by comparing the ratio for the first quarter (in which precatastrophic days and charges occurred) to each of the succeeding quarters. The result was a

proposed adjustment factor of .924. Based on more complete Medpar data, the final adjustment factor is .930. Based on this analysis, we estimate that outlier payments will be 93 percent of the amounts estimated based on FY 1989 covered days and charges. To maintain the outlier pool at 5.1 percent, we are establishing the outlier thresholds based on a 5.5 percent pool (5.1 divided by .930). However, we are adjusting the standardized amounts proportionately based on a 5.1 percent outlier pool.

For FY 1991, we proposed to set the day outlier threshold at the geometric mean length of stay for each DRG plus the lesser of 29 days or 3 standard deviations and the cost outlier threshold at the greater of 2.0 times the prospective payment rate for the DRG or $34,000.

The proposed outlier adjustment factors for FY 1991 were as follows: Urban—.9451; Rural—.9773.

In this final rule, we have continued to maintain the outlier pool at 5.1 percent and establish the outlier thresholds based on a 5.5 percent pool (to adjust for catastrophic coverage reflected in the billing data).

Therefore, for FY 1991 the day outlier threshold is the geometric mean length of stay for each DRG plus the lesser of 29 days or 3.0 standard deviations, and the cost outlier threshold is the greater of 2.0 times the prospective payment rate for the DRG or $35,000.

The final outlier adjustment factors for FY 1991 are as follows: Urban—.944744; Rural—.997373.

The thresholds will essentially maintain the current outlier payment split with 37 percent of cases being paid using the cost outlier methodology and 63 percent using the day outlier methodology. However, 14 percent of the cases meeting the day outlier threshold will be paid using the cost outlier methodology because it yields the higher payment. Our simulation of FY 1991 outlier payments based on FY 1989 Medicare provider analysis and review file (MEDPAR) data indicates that the percentage of cases that will qualify as day outliers is about 77 percent. The bases qualifying as day outliers are expected to receive 83 percent of outlier payments in FY 1991. An estimated 23 percent of outlier cases will be cost only outlier cases, which are expected to receive about 17 percent of outlier payments. The following table illustrates this finding in greater detail:

Type of Outlier	Percentage of outlier cases	Percentage of outlier payments
Meets day threshold only	52	27
Meets day and cost thresholds, paid using day methodology	11	22
Meets day and cost thresholds, paid using cost methodology	14	34
Subtotal—All cases meeting day threshold	77	83
Meets cost threshold only	23	17
Total	100	100

Table 8 of section IV of this addendum updates the statewide average cost-to-charge ratios for urban hospitals and for rural hospitals to be used in calculating cost outlier payments for those hospitals for which the intermediary is unable to compute a reasonable hospital-specific cost-to-charge ratio. Effective October 1, 1990, these statewide average ratios replace the ratios published in the September 1, 1989 final rule (54 FR 36582). These average ratios will be used to calculate cost outlier payments for those hospitals for which the intermediary computes cost-to-charge ratios lower than .35 or greater than 1.245. This range represents 3.0 standard deviations (plus or minus) from the mean of the lost distribution of cost-to-charge ratios for all hospitals. These revised parameters apply to all updates to hospital-specific cost-to-charge ratios based on cost report settlements that occur during FY 1991.

Because of the extent of changes in the outlier policy since the previous examples published in the September 3, 1986 final rule (51 FR 31523), we are providing the following updated outlier computation examples.

Outlier Computation Example

Hospital Y is a 100 bed hospital located in the Indianapolis, Indiana MSA, which is a large urban area. Hospital Y has a ratio of interns and residents to beds of .1 and is eligible for a disproportionate share adjustment of .1212. Mr. Jones' is admitted to Hospital Y on September 1, 1990 and is discharged on October 31, 1990. Mr. Jones stay is classified in DRG 286. Because Mr. Jones' 61 day stay exceeds the 39 day length of stay outlier threshold for DRG 286, Hospital Y is eligible for payment for 22 outlier days in addition to the otherwise applicable prospective payment. The amount of Hospital Y's outlier payment (excluding the usual Federal payment that applies for both outlier and noncutlier cases) is calculated as follows:

Day Outlier:

Step 1—Computation of the Federal Rate

National Large Urban Standardized Amounts:	
Labor-Related	$2,531.54
Nonlabor Related	$1,042.97
Indianapolis MSA Wage Index	.9600
DRG 286 Relative Weight	2.4946

DRG Relative Weight × [(Labor Related National Large Urban Standardized Amount × Indianapolis MSA Wage Index) + Nonlabor Related National Large Urban Standardized Amount] = Federal Rate

2.4946 × [($2,531.54 × 9600) + $1042.97] = $8,664.37

Step 2—Computation of Regular Day Outlier Payment

Outlier Days = (61 − 39) = 22

DRG 286 Geometric Mean Length of Stay = 10.1 Days

Marginal Cost Factor = .60

Outlier Payment (Excludes Disproportionate Share and Indirect Medical Education Costs) = Number of Outlier Days × (Total Federal Prospective Payment + Geometric Mean Length of Stay for DRG) × Marginal Cost Factor

22 × ($8,664.37 ÷ 10.1) × .60 = $11,323.73

Step 3—Computation of Indirect Medical Education Adjustment for Day Outlier

Indirect Medical Education Adjustment Factor = .0744

Indirect Medical Education Outlier Payment = Indirect Medical Education Adjustment Factor × Outlier Payment

.0744 × $11,323.73 = $842.49

Step 4—Computation of Disproportionate Share Payment for Day Outlier

Disproportionate Share Adjustment Factor = .1212

Disproportionate Share Hospital Outlier Payment = Disproportionate Share Hospital Adjustment Factor × Outlier Payment

.1212 × $11,323.73 = $1,372.44

Step 5—Total Day Outlier Payments

Regular	$11,323.73
Indirect Medical Education	842.49
Disproportionate Share Hospital	1,372.44
Total	$13,538.66

Cost Outlier:

This example uses the same facts as in the day outlier example. Mr. Jones incurred total billed charges of $100,000.00.

Step 1—Computation of Hospital Y's Standardized Cost

Billed Charges = $100,000

Hospital Y's Ratio of Cost to Charges = .80

Indirect Medical Education Adjustment Factor = .0744

Disproportionate Share Hospital Adjustment Factor = .1212

Hospital Y's Standardized Cost = Billed charges − [1 + (Indirect Medical Education Adjustment Factor + Disproportionate Share Adjustment Factor)] × Hospital's Ratio of Cost to Charges.

$100,000 − [1 + (.0744 + .1212)] × .80 = $66,912.01

Step 2—Determination of Cost Outlier Threshold

Computation 1 (Based on Federal Rate)

DRG 286 Federal Rate = $8,664.37

Federal Rate Doubled = 2 × $8,664.37 = $17,328.74

Computation 2 (Based on Wage Index and Adjusted Standard Cost Outlier Threshold)

Standardized Cost Outlier Threshold = $35,000

Labor-Related share = 71.40

Nonlabor-Related Share = 28.60

Wage index Adjusted Cost Outlier Threshold=(Standardized Cost Outlier Threshold×Labor Related Share×Indianapolis MSA Wage Index)+(Standard Cost Outlier Threshold×Nonlabor Related Share)
($35,000×.714×.9600)+($35,000×.286)=$34,000.40
Computation 1 Result $17,328.74
Computation 2 Result $34,000.40
Higher of Computation 1 or 2=The Applicable Cost Outlier Threshold=$34,000.40

Step 3—Calculation of Cost Outlier Payment
Marginal Cost Factor=.75
Standardized Cost (From Step 1)=$66,912.01
Hospital Y's Standardized Cost−Cost Outlier Threshold=Outlier Cost
$66,912.01−$34,000.40=$32,911.61
Outlier Cost×Marginal Cost Factor=Cost Outlier Payment
$32,911.61×.75=$24,683.71

Step 4—Cost Outlier Payment for Indirect Medical Education Costs
Percentage Add-On for Indirect Medical Education=7.44 percent
Indirect Medical Education Cost Outlier Payment=Cost Outlier Payment×Percentage Add-On for Indirect Medical Education.
$24,683.71×.0744=$1,836.47

Step 5—Cost Outlier Payment Adjusted for Disproportionate Share Hospital
Disproportionate Share Hospital Percentage Add-On=12.12 percent
Disproportionate Share Hospital Percentage Add-On×Cost Outlier Payment=Disproportionate Share Hospital Outlier Payment
.1212×$24,683.71=$2,991.67

Step 6—Total Cost Outlier Payments

Regular	$24,683.71
Indirect Medical Education	$1,836.47
Disproportionate Share Hospital	$2,991.67
Total	$29,511.85

Determination of Outlier Payment:
Comparison of Total Day Outlier Payments with Total Cost Outlier Payments

Total Day Outlier Payments	$13,538.66
Total Cost Outlier Payment	$29,511.85

Hospital Y receives the higher of the two payments, which is the total cost outlier payment of $29,511.85.

Comment: One commenter argued that total outlier payments have not equaled the amount in the outlier pool. The commenter suggested that the amount actually paid in outliers and the amount in the pool be subject to yearly accounting.

Response: We have responded to similar comments in the September 3, 1986 final rule (52 FR 31525), the September 1, 1987 final rule (52 FR 33048), the September 30, 1988 final rule (53 FR 38508) and the September 1, 1989 final rule (54 FR 36500). We are required by section 1886(d)(5)(A) of the Act to estimate, using the most recent data available, what the level of the outlier thresholds should be in order to yield the proper total amount of payments. We believe that we have consistently met our statutory obligation to ensure that the rate offsets used to finance outlier payments were equal to the estimated proportion of total prospective payments for outliers. We have used the most recent Medicare discharge data available to estimate total prospective payments and outlier payments as a percentage thereof. This is necessarily a prospective process and the resulting estimate may be inaccurate based on later data. We do not believe that payment or recoupment of outlier monies based on retrospective adjustments to the thresholds would be appropriate.

Although we overestimated the outlier pool in the first years of the prospective payment system and thus underestimated outlier payments, this has not been the case for the last few years. In FY 1988 outlier payments represented 6.7 percent of total payments. The outlier offset in FY 1989 was 5.1 percent; however, catastrophic coverage for inpatient hospital benefits was in effect for nine months of the fiscal year. During that period, we estimated an additional one percent of payments would be for outlier cases. The additional one percent was to be financed through additional program payments rather than through the outlier pool. For the full fiscal year, we estimated outlier payments would approximate 5.8 percent of payments. Actual outlier payments were 6.0 percent of total payments. Based on the FY 1989 MEDPAR data, we estimate that outlier payments in FY 1990 will represent approximately 5.3 percent of total prospective payments and will exceed the outlier pool of 5.1 percent by about .2 percent.

B. Adjustments for Area Wage Levels and Cost-of-Living

This section contains an explanation of the application of two types of adjustments to the adjusted standardized amounts that will be made by the intermediaries in determining the prospective payment rates as described in section II.D of this addendum. For discussion purposes, it is necessary to present the adjusted standardized amounts divided into labor and nonlabor portions. Tables 1a, 1b, and 1c, as set forth in this addendum, contain the actual labor-related and nonlabor-related shares that will be used to calculate the prospective payments rates for hospitals located in the 50 States, the District of Columbia, and Puerto Rico.

1. *Adjustment for Area Wage Levels.* Sections 1886 (d)(2)(H) and 1886 (d)(9)(C)(iv) of the Act require that an adjustment be made to the labor-related portion of the prospective payment rates to account for area differences in hospital wage levels. This adjustment is made by the intermediaries by multiplying the labor-related portion of the adjusted standardized amounts by the appropriate wage index for the area in which the hospital is located. In section IV of the preamble to this final rule, we discuss certain revisions we are making to the wage index. This index is set forth in Tables 4a through 4e of this addendum.

2. *Adjustment for Cost of Living in Alaska and Hawaii.* Section 1886 (d)(5)(H) of the Act, formerly section 1886(d)(5)(C)(iv) of the Act, but redesignated by section 6003(e)(A)(i)(A)(i) of Public Law 101-239) authorizes an adjustment to take into account the unique circumstances of hospitals in Alaska and Hawaii. Higher labor-related costs for these two States are taken into account of in the adjustment for area wages above. For FY 1991, the adjustment necessary for nonlabor-related costs for hospitals in Alaska and Hawaii will be made by the intermediaries by multiplying the nonlabor portion of the standardized amounts by the appropriate adjustment factor contained in the table below.

Table of Cost-of-Living Adjustment Factors, Alaska and Hawaii Hospitals

Alaska—All areas	1.25
Hawaii:	
Oahu	1.225
Kauai	1.175
Maui	1.20
Molokai	1.20
Lanai	1.20
Hawaii	1.15

(The above factors are based on data obtained from the U.S. Office of Personnel Management.)

C. DRG Weighting Factors

As discussed in section III of the preamble to this final rule, we have developed a classification system for all hospital discharges, assigning them into DRGs, and have developed weighting factors for each DRG that are intended to reflect the resource utilization of cases in each DRG relative to Medicare cases or other DRGs.

Table 5 of section IV of this addendum contains the weighting factors the we will use for discharges occurring in FY 1991. These factors have been recalibrated as explained in section III.C of the preamble to this final rule.

D. Calculation of Prospective Payment Rates for FY 1991

General Formula for a Calculation of Prospective Payment Rates for FY 1991
Prospective payment rate for all hospitals located outside Puerto Rico except sole community hospitals and Medicare-dependent, small rural hospitals = Federal rate
Prospective payment rate for sole community hospitals (for cost reporting periods beginning before April 1, 1990) = 75 percent of the hospital-specific portion + 25 percent of the Federal regional rate
Prospective payment rate for sole community hospitals and Medicare-dependent, small rural hospitals (for cost reporting periods beginning on or after April 1, 1990) = Whichever of the following rates yield the greatest aggregate payment: 100 percent of the Federal rate, 100 percent of the FY 1982 hospital-specific rate, or 100 percent of the FY 1987 hospital-specific rate
Prospective payment rate for Puerto Rico hospitals = 75 percent of the Puerto Rico rate + 25 percent of a discharge-weighted average of the large urban, other urban, and rural national rates

1. *Federal Rate.* For discharges occurring on or after October 1, 1990 and before October 1, 1991, except for sole community hospitals, Medicare-dependent, small rural hospitals, and hospitals located in Puerto Rico, the hospital's rate is comprised exclusively of the Federal national rate. (For discharges that occurred on or after April 1, 1988 and before October 1, 1990, section 1886(d)(1)(A)(iii) of the Act provided that the Federal rate is comprised of 100 percent of the Federal national rate except for those hospitals located in Census regions that have a regional rate that is higher than the national rate.) For cost reporting periods beginning before April 1, 1990, the 25 percent Federal portion payable to sole community hospitals is based entirely on the Federal regional rate. The Federal rates are determined as follows:

Step 1—Select the appropriate regional or national adjusted standardized amount considering the type of hospital and designation of the hospital as large urban, other urban, or rural (see Tables 1a and 1b, section IV of this addendum).

Step 2—Multiply the labor-related portion of the standardized amount by the applicable wage index for the geographic area in which the hospital is located (see Tables 4a–4e, section IV of this addendum).

Step 3—For hospitals in Alaska and Hawaii, multiply the nonlabor-related portion of the standardized amount by the appropriate cost-of-living adjustment factor.

Step 4—Sum the amount from step 2 and the nonlabor portion of the standardized amount (adjusted if appropriate under step 3).

Step 5—Multiply the final amount from step 4 by the weighting factor corresponding to the appropriate DRG (see Table 5, section IV of this addendum).

Step 6—For sole community hospitals with cost reporting periods beginning before April 1, 1990, multiply the result in step 5 by 25 percent. The result is the Federal portion of the FY 1991 prospective payment for a given discharge for a sole community hospital, with a cost reporting period beginning before April 1, 1990.

2. Hospital-Specific Rate (Applicable Only to Sole Community Hospitals and Medicare-Dependent, Small Rural Hospitals)

For cost reporting periods beginning on or after October 1, 1983 and before April 1, 1990, sole community hospitals were paid on the basis of a rate per discharge composed of 75 percent of the hospital-specific rate and 25 percent of the applicable Federal regional rate. Section 1886(d)(5)(D)(i) of the Act), as added by section 6003(e) of Public Law 101–239, provides that for cost reporting periods beginning on or after April 1, 1990, sole community hospitals are paid based on whichever of the following rates yields the greatest aggregate payment: The Federal rate (subject to the regional floor for discharges occurring before October 1, 1990), the updated hospital-specific rate based on FY 1982 cost per discharge, or the updated hospital-specific rate based on FY 1987 cost per discharge. In addition, section 6003(f) of Public Law 101–239 added a new section 1886(d)(5)(G) of the Act that creates a new category of hospitals eligible for special payment under the prospective payment system. These hospitals are known as Medicare-dependent small rural hospitals and, effective for cost reporting periods beginning or after April 1, 1990 and ending before April 1, 1993, they are paid based on the same formula applicable to sole community hospitals.

Hospital-specific rates have been determined for each of these hospitals based on both the FY 1982 cost per discharge and the FY 1987 cost per discharge. For a more detailed discussion on the calculation of the FY 1982 hospital-specific rate and the FY 1987 hospital-specific rate, we refer the reader to the September 1, 1983 interim final rule (48 FR 39772) and the April 20, 1990 final rule with comment (55 FR 15150).

a. *Updating the FY 1982 and FY 1987 Hospital-Specific Rates for FY 1991 Cost Reporting Periods.* For cost reporting periods beginning on or after October 1, 1990, we are increasing the hospital-specific rates by 5.2 percent (the market basket percentage increase) for hospitals located in all areas. As required by section 1886(d)(3)(B) of the Act, this is the same percentage increase by which we are increasing the Federal rates for FY 1991.

b. *Calculation of Hospital-Specific Rate.* For sole community hospital and Medicare-dependent small rural hospital cost reporting periods beginning on or after October 1, 1990 and before October 1, 1991, the hospital-specific rate applicable to the hospital will be calculated by multiplying the hospital's hospital-specific rate for the preceding cost reporting period by the applicable update factor (that is, 5.2 percent). In addition, the hospital-specific rate will be adjusted by the budget neutrality adjustment factor (that is, .998637) as discussed in section II.A.4.b of this Addendum. This resulting rate will be used in determining under which rate a sole community or Medicare-dependent small rural hospital is paid for its cost reporting period beginning on or after October 1, 1990, based on the formula set forth above.

3. *General Formula for Calculation of Prospective Payment Rates for Hospitals Located in Puerto Rico Beginning On or After October 1, 1990 and Before October 1, 1991*—

a. *Puerto Rico Rate.* The Puerto Rico prospective payment rate is determined as follows:

Step 1—Select the appropriate adjusted average standardized amount considering the large urban, other urban, or rural designation of the hospital (see Table 1c, section IV of the addendum).

Step 2—Multiply the labor-related portion of the standardized amount by the appropriate wage index (see Tables 4a and 4b, section IV of the addendum).

Step 3—Sum the amount from step 2 and the nonlabor portion of the standardized amount.

Step 4—Multiply the result in step 3 by 75 percent.

Step 5—Multiply the amount from step 3 by the weighting factor corresponding to the appropriate DRG weight (see Table 5, section IV to the addendum).

b. *National Rate.* The national prospective payment rate is determined as follows:

Step 1—Multiply the labor-related portion of the national average standardized amount (see Table 1c, section IV of the addendum) by the appropriate wage index.

Step 2—Sum the amount from step 1 and the nonlabor portion of the national average standardized amount.

Step 3—Multiply the result in step 2 by 25 percent.

Step 4—Multiply the amount from step 3 by the weighting factor corresponding to the appropriate DRG weight (see Table 5, section IV of the addendum).

The sum of the Puerto Rico rate and the national rate computed above equals the prospective payment of a given discharge for a hospital located in Puerto Rico.

III. Target Rate Percentages for Hospitals and Hospital Units Excluded From the Prospective Payment System

The inpatient operating costs of hospitals and hospital units excluded from the prospective payment system are subject to rate-of-increase limits established under the authority of section 1886(b) of the Act, which is implemented in § 413.40 of the regulations. Under these limits, an annual target amount (expressed in terms of the inpatient operating cost per discharge) is set for each hospital, based on the hospital's own historical cost experience, trended forward by the applicable update factors. This target amount is applied as a ceiling on the allowable costs per discharge for the hospital's next cost reporting period.

A hospital that has inpatient operating costs per discharge in excess of its target amount would be paid no more than that amount. However, a hospital that has inpatient operating costs less than its target amount would be paid its costs plus the lower of—

(1) 50 percent of the difference between the inpatient operating cost per discharge and the target amount; or

(2) 5 percent of the target amount.

Each hospital's target amount is adjusted annually, before the beginning of its cost reporting period, by an applicable target rate percentage. For cost reporting periods beginning on or after October 1, 1990 and before October 1, 1991, section 1886(b)(3)(B)(ii) of the Act provides that the applicable percentage increase is the market basket percentage increase. In order to determine a hospital's target amount for its cost reporting period beginning in FY 1991, the hospital's target amount for its reporting period that began in FY 1990 is increased by the market basket percentage increase for FY 1991. The most recent forecasted market basket increase for FY 1991 for hospitals and units excluded from the prospective payment system is 5.3 percent (discussed in section V of the preamble of this final rule). Therefore, the applicable percentage increase is also 5.3 percent.

IV. Tables

This section contains the tables referred to throughout the preamble to this final rule and in this addendum. For purposes of this final rule, and to avoid confusion, we have retained the designations of Tables 1a, 1b, 1c, 3c, 4a, 4b, and 5 that were first used in the September 1, 1983 initial prospective

payment final rule (48 FR 39844). Tables 1a, 1b, 1c, 2a, 2b, 3C, 4a, 4b, 4c, 4d, 4e, 4f, 5, 6a, 6b, 6c, 6d, 6e, 6f, 6g, 6h, 6i, 6j, 6k, 6l, 6m, 7A, 7B, 8, and 9 are presented below. The tables presented below are as follows:

Table 1a—National Adjusted Standardized Amounts, Labor/Nonlabor
Table 1b—Regional Adjusted Standardized Amounts, Labor/Nonlabor
Table 1c—Adjusted Standardized Amounts for Puerto Rico, Labor/Nonlabor
Table 2a—Prospective Payment Hospital Market Basket (1987-Based Weights and Cost Categories)
Table 2b—Excluded Hospital Market Basket (1987-Based Weights and Cost Categories)
Table 3C—Hospital Case Mix Indexes for Discharges Occurring in Federal Fiscal Year 1989
Table 4a—Wage Index for Urban Areas
Table 4b—Wage Index for Rural Areas
Table 4c—Wage Index for Rural Counties Whose Hospitals are Deemed Urban—Using Urban Area Wage Index
Table 4d—Wage Index for Rural Counties Whose Hospitals are Deemed Urban—Computed as Separate Urban Areas
Table 4e—Wage Index for Rural Counties Whose Hospitals are Deemed Urban—Using Statewide Rural Wage Index
Table 4f—Wage Areas Subject to Wage Index Phase-In
Table 5—List of Diagnosis Related Groups (DRGs), Relative Weighting Factors, Geometric Mean Length of Stay, and Length of Stay Outlier Cutoff Points Used in the Prospective Payment System
Table 6a—New Diagnosis Codes
Table 6b—New Procedure Codes
Table 6c—Invalid Diagnosis Codes (4 digits)
Table 6d—Invalid Procedure Code
Table 6e—Additions to the CC Exclusions List
Table 6f—Deletions to the CC Exclusions List
Table 6g—Additional OR Procedures that Group to DRG 477
Table 6h—Diagnosis Codes by Body Site Category for MDC 24
Table 6i—HIV-Related Conditions Necessary for Assignment to MDC 25
Table 6j—Procedure Codes Assigned to Revised DRGs in MDC 5
Table 6k—Diagnoses that Group to DRG 482 when a Tracheostomy is Performed
Table 6l—Revised Diagnosis Code Titles
Table 6m—Revised Procedure Code Titles
Table 7A—Medicare Prospective Payment System Selected Percentile Lengths of Stay FY 89 MEDPAR Update 12/89 GROUPER V7.0
Table 7B—Medicare Prospective Payment System Selected Percentile Lengths of Stay FY 89 MEDPAR Update 12/89 GROUPER V8.0
Table 8—Statewide Average Cost-to-Charge Ratios for Urban and Rural Hospitals (Case Weighted)
Table 9—Sole Community Hospital—Weather Data

TABLE 1A.—NATIONAL ADJUSTED STANDARDIZED AMOUNTS, LABOR/NONLABOR

Large urban		Other urban		Rural	
Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
2,531.54	1,042.97	2,491.46	1,026.46	2,450.79	789.61

TABLE 1b.—REGIONAL ADJUSTED STANDARDIZED AMOUNTS, LABOR/NONLABOR

	Large urban		Other urban		Rural	
	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
1. New England (CT, ME, MA, NH, RI, VT)	2,658.52	1,089.08	2,616.44	1,071.83	2,717.17	937.09
2. Middle Atlantic (PA, NJ, NY)	2,388.44	1,031.77	2,350.63	1,015.44	2,602.23	885.88
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	2,549.58	952.21	2,509.22	937.14	2,487.62	768.17
4. East North Central (IL, IN, MI, OH, WI)	2,689.19	1,126.63	2,646.62	1,108.79	2,519.04	853.77
5. East South Central (AL, KY, MS, TN)	2,446.90	862.21	2,408.16	848.57	2,465.48	716.34
6. West North Central (IA, KS, MN, MO, NE, ND, SD)	2,550.31	1,026.55	2,509.93	1,010.29	2,396.28	765.30
7. West South Central (AR, LA, OK, TX)	2,535.64	945.77	2,495.49	930.79	2,298.12	703.80
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	2,445.98	1,013.05	2,407.26	997.00	2,324.01	809.47
9. Pacific (AK, CA, HI, OR, WA)	2,379.27	1,157.19	2,341.60	1,138.87	2,260.30	911.91

TABLE 1C.—ADJUSTED STANDARDIZED AMOUNTS FOR PUERTO RICO, LABOR/NONLABOR

	Large urban		Other urban		Rural	
	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related	Labor-related	Nonlabor-related
Puerto Rico	2,276.86	473.53	2,240.81	466.03	1,670.52	360.13
National	2,496.53	972.87				

TABLE 2A.—PROSPECTIVE PAYMENT HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)

Expenses Categories	1987-based market basket weights [1]
1. Wages and Salaries [2]	52.2
2. Employee Benefits [2]	9.5
3. Other Professional Fees [2]	1.7
4. Energy and Utilities	2.4

TABLE 2A.—PROSPECTIVE PAYMENT HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)—Continued

Expenses Categories	1987-based market basket weights [1]
A. Fuel, Oil, Coal and Other Fuel	0.6
B. Electricity	1.1
C. Natural Gas	0.3

TABLE 2A.—PROSPECTIVE PAYMENT HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)—Continued

Expenses Categories	1987-based market basket weights [1]
D. Motor Gasoline	0.2
E. Water and Sewerage	([3])

TABLE 2A.—PROSPECTIVE PAYMENT HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)—Continued

Expenses Categories	1987-based market basket weights [1]
5. Professional Liability Insurance	1.4
6. All Other	32.8
A. All Other Products:	
(1) Pharmaceuticals	3.9
(2) Food	
(a) Direct Purchase	2.1
(b) Contract Service	1.2
(3) Chemicals	3.1
(4) Medical Instruments	2.7
(5) Photo Supplies	2.6
(6) Rubber and Plastics	2.3
(7) Paper Products	1.4
(8) Apparel	1.1
(9) Mach. and Equip	0.5
(9) Miscellaneous Products	0.8
Subtotal	21.8
B. All Other Services:	
(1) Business Services [2]	3.8
(2) Computer Services [2]	2.0
(3) Transportation and Shipping	1.2
(4) Telephone	1.0
(5) Blood Services [2]	0.6
(6) Postage [2]	0.4
(7) All Other Labor Intensive [2]	1.2
(8) All Other Non-Labor Intensive	0.8
Subtotal	11.0

[1] These weights are used to develop the revised labor-related and nonlabor-related components of the standardized amounts in Tables 1a, 1b, and 1c. Total market basket weights may not equal 100 due to rounding.
[2] Considered labor-related.
[3] Rounds to less than 0.1

TABLE 2b.—EXCLUDED HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)

Expense categories	1987-based market basket weights [1]
1. Wages and Salaries	61.3
2. Employee Benefits	13.0
3. Professional Fees	1.4
4. Energy and Utilities	2.8
A. Fuel Oil, Coal, Etc	0.7
B. Electricity	1.3
C. Natural Gas	0.4
D. Motor Gasoline	0.3
E. Water and Sewerage	([2])
5. Professional Liability Ins	1.0
6. All Other	20.6
A. All Other Products:	
(1) Pharmaceuticals	1.6
(2) Food	
(a) Direct Purchase	2.5
(b) Contract Service	0.7
(3) Chemicals	1.9
(4) Medical Instruments	1.6
(5) Photo. Supplies	1.6
(6) Rubber and Plastics	1.4
(7) Paper Products	0.9
(8) Apparel	0.7
(9) Mach. and Equip	0.3
(10) Misc. Products	0.5
Subtotal	13.7

TABLE 2b.—EXCLUDED HOSPITAL MARKET BASKET (1987-BASED WEIGHTS AND COST CATEGORIES)—Continued

Expense categories	1987-based market basket weights [1]
B. All Other Services:	
(1) Business Services	2.4
(2) Computer Services	1.2
(3) Trans. and Shipping	0.8
(4) Telephone	0.6
(5) Blood Services	0.4
(6) Postage	0.2
(7) All Other Labor Intensive	0.8
(8) All Other Nonlabor Intensive	0.5
Subtotal	6.9

[1] Total market basket weights may not equal 100 due to rounding.
[2] Rounds to less than 0.1.

Note—(1) The wage and price proxies are the same for the excluded and prospective payment system market baskets.

(2) The 1987 excluded hospital market basket has a composite set of weights for Medicare-certified psychiatric, long-term care, rehabilitation, and children's hospitals.

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TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 1 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
010001	01.3129	010061	00.9966	010126	01.0598	030010	01.3822	030079	00.8412
010004	00.9824	010062	01.0198	010127	01.3797	030011	01.2987	030080	01.4298
010005	01.1842	010064	01.4943	010128	00.9391	030012	01.1507	030081	01.1283
010006	01.2608	010065	01.1236	010129	00.9984	030013	01.1811	030083	01.3546
010007	01.0803	010066	00.9219	010130	01.1108	030014	01.4076	030084	01.0813
010008	01.1105	010068	01.1704	010131	01.3696	030016	01.1804	030085	01.2353
010009	01.0675	010069	01.1925	010134	00.8520	030017	01.3220	030086	01.2590
010010	00.9953	010072	01.1158	010136	00.9704	030018	01.4223	030087	01.3210
010011	01.3339	010073	01.0073	010137	01.3531	030019	01.2358	030088	01.2709
010012	01.2924	010075	01.2510	010138	00.9598	030022	01.4195	030089	01.2023
010015	01.2359	010078	01.2315	010139	01.4639	030023	01.1586	030091	00.9770
010016	01.1975	010079	01.1921	010143	01.1366	030024	01.4511	030092	01.2599
010018	01.0732	010080	00.9862	010144	01.3310	030025	01.2102	030093	01.1508
010019	01.1665	010081	01.6062	010145	01.2663	030027	01.0734	030094	01.2044
010020	01.0007	010083	01.0694	010146	01.1075	030030	01.5425	030469	01.0751
010021	01.2372	010084	01.3307	010148	00.9690	030033	01.3427	030899	01.2348
010022	01.0055	010085	01.3009	010149	01.2889	030034	01.1251	040001	01.0338
010023	01.2517	010086	01.0025	010150	01.0339	030035	01.1752	040002	01.1381
010024	01.2652	010087	01.3135	010152	01.2817	030036	01.2507	040003	01.0353
010025	01.1985	010089	01.0434	010153	00.9027	030037	01.6908	040004	01.2931
010027	00.9803	010090	01.3951	020001	01.4662	030038	01.4794	040005	01.0033
010028	01.1334	010091	01.0819	020002	01.1698	030040	01.1031	040006	01.0088
010029	01.3670	010092	01.3136	020004	01.0566	030041	00.8968	040007	01.4770
010030	01.0153	010094	01.2434	020005	00.9506	030043	01.1023	040008	01.1256
010031	01.2347	010095	01.1378	020006	01.0259	030044	01.1704	040010	01.1786
010032	00.9073	010096	00.9175	020007	01.0177	030046	00.9495	040011	00.9942
010033	01.8377	010097	01.0736	020008	00.9543	030047	00.9918	040013	01.1045
010034	01.1179	010098	01.0702	020009	00.9251	030049	00.9483	040014	01.1735
010035	01.1330	010099	01.0371	020010	00.8557	030051	01.1393	040015	01.1125
010036	01.0601	010100	01.2294	020011	00.9245	030054	00.9429	040016	01.4014
010038	01.1557	010101	01.0887	020012	01.2842	030055	01.1287	040017	01.2145
010039	01.6012	010102	00.9273	020013	00.8459	030057	01.2386	040018	01.0850
010040	01.2083	010103	01.4796	020014	00.9998	030059	01.3875	040019	01.1528
010043	01.0008	010104	01.5297	020017	01.3111	030060	01.1479	040020	01.4460
010044	01.0650	010108	01.2219	020018	00.9313	030061	01.3825	040021	01.2396
010045	01.0718	010109	01.0443	020019	00.9557	030062	01.2476	040022	01.6231
010046	01.2875	010110	00.8964	020020	00.9650	030063	01.0251	040024	00.9492
010047	00.9109	010112	01.1163	020021	01.1678	030064	01.4440	040025	01.0411
010049	01.0480	010113	01.4511	020024	00.9587	030065	01.4080	040026	01.3196
010050	00.9447	010114	01.2393	020025	01.0004	030067	01.0953	040027	01.1800
010051	00.8881	010115	00.9310	020026	01.2297	030068	01.0035	040028	01.0378
010052	01.0675	010117	00.9505	020027	01.0293	030069	01.2249	040029	01.1026
010053	01.0650	010118	01.1621	030001	01.2860	030071	00.9040	040030	00.9052
010054	01.1628	010119	01.2597	030002	01.6114	030072	00.8888	040031	00.9456
010055	01.3160	010120	00.9848	030003	01.2908	030073	01.1405	040032	00.9744
010056	01.2371	010121	01.1334	030004	00.9258	030074	01.1972	040033	00.9185
010057	01.1146	010122	01.0105	030006	01.4441	030075	00.8883	040035	00.9150
010058	01.0992	010123	01.2218	030007	01.2515	030076	00.8948	040036	01.2214
010059	00.9692	010124	01.2598	030008	01.7157	030077	00.9198	040037	00.9827
010060	00.8908	010125	01.0515	030009	01.1716	030078	01.0804	040039	01.0934

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 2 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
040040	00.9777	040122	01.1216	050063	01.3618	050122	01.4364	050190	01.0979
040041	01.1663	040124	01.1661	050065	01.5430	050124	01.2514	050191	01.3724
040042	01.2389	040126	00.9766	050066	01.2852	050125	01.2387	050192	01.0537
040043	00.9318	040130	01.8085	050067	01.2523	050126	01.3419	050193	01.3427
040044	00.9318	040131	01.0512	050068	01.1057	050127	01.2539	050194	01.2986
040045	00.9906	050002	01.2652	050069	01.5319	050128	01.4518	050195	01.3141
040047	00.9937	050004	01.1823	050070	01.2157	050129	01.4951	050196	01.2885
040048	01.1201	050006	01.2525	050071	01.2200	050131	01.3297	050197	01.7674
040050	01.1225	050007	01.4741	050072	01.2205	050132	01.2800	050199	01.1200
040051	00.9794	050008	01.4393	050073	01.1349	050133	01.2320	050201	01.5784
040053	01.0422	050009	01.5293	050074	01.0535	050135	01.3281	050202	01.2328
040054	01.0172	050013	01.9871	050075	01.2566	050136	01.2399	050204	01.3987
040055	01.2209	050014	01.1687	050076	01.4618	050137	01.2094	050205	01.2462
040058	00.9376	050015	01.4005	050077	01.5606	050138	01.5760	050207	01.1664
040060	00.9722	050016	01.1502	050078	01.1715	050139	01.2069	050208	01.2386
040062	01.2920	050017	01.7140	050079	01.3892	050140	01.2328	050211	01.2785
040063	01.3593	050018	01.2324	050080	01.2771	050143	01.2705	050212	01.1749
040064	00.9957	050019	00.9836	050081	01.6010	050144	01.5401	050213	01.2896
040066	00.9224	050021	01.3048	050082	01.3848	050145	01.2454	050214	01.3854
040067	00.9742	050022	01.3964	050084	01.4412	050146	01.1851	050215	01.4507
040069	01.0426	050024	01.3932	050086	01.1313	050147	00.8302	050217	01.1602
040070	00.9000	050025	01.6013	050087	01.1023	050148	01.1207	050219	01.3166
040071	01.2574	050026	01.5083	050088	01.0674	050149	01.1868	050220	01.2232
040072	01.1391	050028	01.2528	050089	01.3421	050150	01.2738	050221	01.4727
040074	01.1256	050029	01.3730	050090	01.3274	050151	01.0921	050222	01.4260
040075	01.0612	050030	01.3051	050091	01.1629	050152	01.4265	050224	01.4600
040076	00.9561	050032	01.2372	050092	01.0074	050153	01.5611	050225	01.2564
040077	00.9649	050033	01.3473	050093	01.5125	050154	01.2555	050226	01.4223
040078	01.2672	050034	01.2801	050095	01.8085	050155	01.1808	050228	01.3043
040080	01.0351	050036	01.6988	050096	01.0313	050158	01.4652	050229	01.2521
040081	00.9054	050038	01.2719	050097	01.4450	050159	01.4848	050230	01.3589
040082	01.1635	050039	01.5773	050099	01.3652	050161	01.9336	050231	01.4437
040084	01.1523	050040	01.1949	050100	01.6661	050164	01.4772	050232	01.7794
040085	01.1573	050041	01.2368	050101	01.3419	050166	01.1287	050233	01.1820
040088	01.1806	050042	01.1423	050102	01.2940	050167	01.3472	050234	01.2816
040090	00.9361	050043	01.5523	050103	01.4663	050168	01.6575	050235	01.4377
040091	01.0878	050045	01.1538	050104	01.3437	050169	01.4184	050236	01.2908
040093	00.9699	050046	01.2576	050107	01.3442	050170	01.3822	050238	01.3799
040095	00.9888	050047	01.5339	050108	01.3896	050172	01.2419	050239	01.3906
040100	01.1073	050049	01.2148	050109	01.9795	050173	01.3404	050240	01.3671
040105	01.0476	050051	01.2850	050110	01.1344	050174	01.5667	050241	01.2397
040106	01.0576	050052	01.0658	050111	01.2794	050175	01.4065	050242	01.4436
040107	01.0539	050053	01.2991	050112	01.4027	050177	01.2971	050243	01.4092
040108	00.8949	050054	01.2881	050113	01.1841	050179	01.2568	050245	01.4209
040109	01.2272	050055	01.2312	050114	01.5094	050180	01.4173	050248	01.1057
040114	01.6895	050056	01.3178	050115	01.4584	050181	01.3017	050251	01.0917
040115	00.9585	050057	01.3868	050116	01.3469	050183	01.2639	050253	00.8592
040116	01.2568	050058	01.3511	050117	01.2205	050186	01.3909	050254	01.1813
040118	01.1106	050060	01.3474	050118	01.1806	050188	01.4070	050256	01.5984
040119	01.1522	050061	01.2743	050121	01.2634	050189	00.9384	050257	01.2967

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 3 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
050258	01.4116	050331	01.2698	050413	01.2912	050486	01.5579	050570	01.6935
050260	00.9682	050333	01.0191	050414	01.2790	050488	01.2122	050571	01.3287
050261	01.2081	050334	01.4010	050417	01.1314	050489	01.1155	050573	01.4656
050262	01.5463	050335	01.2301	050418	01.2863	050491	01.4456	050575	01.1922
050263	01.3132	050336	01.2627	050419	01.1274	050492	01.3106	050577	01.3186
050264	01.3638	050337	01.2328	050420	01.2974	050494	01.0548	050578	01.2133
050267	01.4662	050342	01.3739	050421	01.2854	050496	01.6222	050579	01.4375
050268	01.2714	050343	01.1676	050423	01.0835	050497	01.0411	050580	01.2717
050269	01.2518	050345	01.3554	050424	01.6994	050498	01.1726	050581	01.3063
050270	01.3212	050348	01.4815	050425	01.2027	050502	01.6743	050583	01.7444
050272	01.3248	050349	01.1090	050426	01.4508	050503	01.4663	050584	01.2077
050274	01.0060	050350	01.4099	050427	00.9687	050506	01.3799	050585	01.3005
050276	01.0905	050351	01.4459	050430	01.0184	050510	01.2495	050586	01.3104
050277	01.3664	050352	01.2782	050431	01.2422	050512	01.2036	050587	01.2403
050278	01.3101	050353	01.6140	050432	01.5103	050515	01.2941	050588	01.2730
050279	01.2262	050355	00.9637	050433	01.0498	050516	01.3898	050589	01.4544
050280	01.2838	050357	01.6734	050434	01.1414	050517	01.3223	050590	01.3607
050281	01.4025	050359	01.0978	050435	01.1566	050522	01.3602	050591	01.2252
050282	01.2467	050360	01.2950	050436	01.0276	050523	01.1830	050592	01.3616
050283	01.3336	050362	00.8512	050438	01.4290	050526	01.3167	050593	01.2829
050286	01.0242	050363	01.3727	050440	01.1277	050527	01.2991	050594	02.0819
050289	01.5627	050366	01.2429	050441	01.6368	050528	01.2150	050597	01.2642
050290	01.4474	050367	01.2608	050442	01.2474	050530	01.3097	050598	01.3673
050291	01.1910	050369	01.3082	050443	00.9592	050531	01.1194	050599	01.4659
050292	01.1889	050372	01.1443	050444	01.2251	050534	01.4023	050601	01.2770
050293	01.1692	050373	01.1368	050446	00.8717	050535	01.5079	050603	01.4154
050295	01.3087	050376	01.2877	050447	01.3542	050537	01.2128	050604	01.3036
050296	01.1916	050377	01.0360	050448	01.0026	050539	01.3160	050607	01.2548
050298	01.1809	050378	01.2204	050449	01.3195	050541	01.3621	050608	01.2676
050299	01.3159	050379	01.1798	050450	01.0775	050542	01.1070	050609	01.2538
050300	01.3156	050380	01.5063	050451	01.0171	050543	01.1811	050613	01.0168
050301	01.2244	050381	01.0566	050454	01.6190	050544	01.3163	050615	01.5083
050302	01.2844	050382	01.2893	050455	01.5894	050545	01.0184	050616	01.2618
050305	01.3872	050383	01.4063	050456	01.3638	050546	01.0503	050618	01.1050
050307	01.4414	050385	01.2271	050457	01.5703	050547	00.9240	050619	01.3312
050308	01.5184	050387	00.9840	050458	00.9588	050548	01.4304	050622	01.2654
050309	01.2851	050388	00.9085	050459	01.3941	050549	01.6425	050623	01.0894
050310	01.2808	050390	01.2562	050464	01.8330	050550	01.2867	050624	01.2711
050312	01.7485	050391	01.3378	050467	01.2775	050551	01.3350	050625	01.4413
050313	01.2112	050392	00.9689	050468	01.3547	050552	01.1508	050630	01.1677
050315	01.3721	050393	01.4606	050469	01.0766	050557	01.3564	050633	01.2241
050317	01.3465	050394	01.4019	050470	01.1976	050559	01.2897	050635	01.2493
050319	01.3544	050396	01.4756	050471	01.6759	050560	01.2309	050636	01.3066
050320	01.2830	050397	01.0390	050476	01.3040	050561	01.0950	050637	01.2610
050324	01.7196	050401	01.2174	050477	01.3147	050564	01.1981	050638	01.0054
050325	01.2367	050404	01.2137	050478	01.1411	050565	01.2337	050641	01.1744
050326	01.0306	050406	01.0235	050481	01.4565	050566	00.9845	050643	00.8532
050327	01.5918	050407	01.1750	050482	00.9566	050567	01.5215	050644	01.1329
050328	01.3853	050410	01.1189	050483	01.3676	050568	01.2263	050649	01.2943
050329	01.2938	050411	01.2237	050485	01.5530	050569	01.2052	050650	01.2204

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 4 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
050651	01.2487	060028	01.3800	060093	00.9565	090003	01.4045	100048	00.9215
050655	00.9853	060029	00.9677	060096	01.0163	090004	01.5315	100049	01.2978
050660	01.1132	060030	01.2348	060098	01.3756	090005	01.2969	100050	01.1188
050661	00.8975	060031	01.3982	060099	00.9975	090006	01.2640	100051	01.1508
050662	00.8169	060032	01.3255	060100	01.2289	090007	01.1145	100052	01.2726
050663	01.0773	060033	01.1464	060101	01.7402	090008	01.2686	100053	01.1504
050666	01.0468	060034	01.2966	070001	01.7000	090009	01.2458	100054	01.3668
050667	01.1273	060035	01.1090	070002	01.6593	090010	01.0875	100055	01.3475
050668	01.1477	060036	01.1894	070003	01.2185	090011	01.6693	100056	01.4260
050669	01.2490	060037	01.0294	070004	01.1879	100001	01.2932	100057	01.3163
050670	00.7573	060038	01.1682	070005	01.2958	100002	01.3602	100059	01.4980
050671	01.0801	060039	01.0391	070006	01.2338	100004	01.0569	100060	01.5457
050672	00.6715	060041	01.1004	070007	01.2706	100005	00.9931	100061	01.4233
050674	01.1597	060042	00.9012	070008	01.2776	100006	01.5713	100062	01.5632
050675	01.3152	060043	00.9313	070009	01.2146	100007	01.8232	100063	01.3249
050676	00.9224	060044	01.2320	070010	01.3958	100008	01.6330	100065	01.2010
050677	01.2775	060045	00.9671	070011	01.2635	100009	01.3878	100067	01.4071
050678	01.2333	060046	01.1403	070012	01.2370	100010	01.3637	100068	01.4623
050679	01.1430	060047	01.0807	070013	01.3167	100012	01.3630	100069	01.2775
050680	01.1940	060049	01.0761	070014	01.1433	100014	01.2502	100070	01.3587
050682	00.8582	060050	01.1176	070015	01.2566	100015	01.2591	100071	01.2936
050683	00.9587	060051	01.3219	070016	01.2778	100016	01.0606	100072	01.2141
050684	01.1715	060052	00.9452	070017	01.3548	100017	01.5807	100073	01.6726
050685	01.1332	060053	01.0204	070018	01.1766	100018	01.3562	100074	01.2351
050686	00.9039	060054	01.2677	070019	01.2246	100019	01.5072	100075	01.6429
050687	01.0800	060056	00.9174	070020	01.4022	100020	01.3453	100076	01.2999
060001	01.4129	060057	01.3356	070021	01.2374	100021	01.3249	100077	01.2996
060003	01.1682	060058	00.9018	070022	01.5776	100022	01.4705	100078	01.1968
060004	01.1496	060060	01.0024	070023	01.3296	100023	01.3273	100079	01.2305
060005	01.6667	060062	00.9891	070024	01.2102	100024	01.2434	100080	01.5165
060006	01.1911	060063	01.1639	070025	01.5209	100025	01.5102	100081	01.1371
060007	01.2636	060064	01.3248	070026	01.2057	100026	01.4122	100082	01.3758
060008	01.1033	060065	01.2980	070027	01.2957	100027	00.8795	100083	01.1551
060009	01.2518	060066	00.9285	070028	01.4298	100028	01.3493	100084	01.3811
060010	01.5519	060067	01.0929	070029	01.2903	100029	01.3004	100085	01.1563
060011	01.1559	060068	01.1257	070030	01.2273	100030	01.0663	100086	01.2390
060012	01.3881	060070	01.0975	070031	01.3006	100032	01.3304	100087	01.6317
060013	01.2448	060071	01.1762	070033	01.2510	100033	01.4194	100088	01.3448
060014	01.4980	060072	00.9009	070034	01.2794	100034	01.4377	100089	01.2875
060015	01.3475	060073	00.8903	070035	01.3096	100035	01.4102	100090	01.2852
060016	01.0972	060074	00.8634	070036	01.3178	100036	01.3796	100092	01.1875
060017	01.2180	060075	01.2159	080001	01.4864	100038	01.5194	100093	01.4540
060018	01.1074	060076	01.2907	080002	01.1899	100039	01.4531	100098	01.0900
060019	01.7058	060077	01.1178	080003	01.2539	100040	01.5005	100099	01.1927
060020	01.4570	060083	01.1356	080004	01.2692	100042	01.2439	100100	01.1751
060022	01.3371	060085	00.9439	080005	01.2522	100043	01.3072	100102	01.1346
060023	01.4091	060087	01.4189	080006	01.1174	100044	01.3483	100103	01.0052
060024	01.4963	060088	01.0967	080007	01.1577	100045	01.3477	100105	01.2627
060026	01.4310	060090	00.9621	090001	01.3896	100046	01.3196	100106	01.0827
060027	01.3320	060092	00.9442	090002	01.2824	100047	01.2527	100107	01.2037

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 5 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
100108	00.9867	100170	01.2784	100237	01.8745	110020	01.1720	110079	01.1145
100109	01.2374	100172	01.3117	100238	01.3718	110023	01.1641	110080	01.1352
100110	01.3270	100173	01.2925	100239	01.4478	110024	01.2980	110081	01.0281
100112	01.0690	100174	01.5118	100240	00.7585	110025	01.2380	110082	01.7750
100113	01.6046	100175	01.0663	100241	01.0517	110026	01.1480	110083	01.4026
100114	01.3212	100176	01.8778	100242	01.2234	110027	01.0580	110085	01.1280
100115	01.1856	100177	01.3790	100243	01.3542	110028	01.4512	110086	01.1488
100117	01.1596	100179	01.5284	100244	01.3492	110029	01.2839	110087	01.1949
100118	01.1691	100180	01.4734	100246	01.3061	110030	01.2313	110088	00.9028
100120	01.2862	100181	01.2539	100248	01.5180	110031	01.1499	110089	01.1239
100121	01.0836	100183	01.2716	100249	01.2813	110032	01.1493	110091	01.2611
100122	01.3055	100185	01.1966	100252	01.2248	110033	01.3200	110092	01.0532
100124	01.3027	100186	01.3633	100253	01.3629	110034	01.2864	110093	01.0036
100125	01.1237	100187	01.2300	100254	01.3575	110035	01.2554	110094	01.0233
100126	01.4255	100189	01.3336	100255	01.3289	110036	01.5019	110095	01.2695
100127	01.4354	100191	01.2989	100256	01.2971	110037	01.1519	110096	01.1519
100128	02.2782	100194	01.2590	100258	01.6107	110038	01.2377	110097	01.0635
100129	01.2782	100195	01.3732	100259	01.3088	110039	01.2752	110098	01.0382
100130	01.2780	100196	01.2204	100260	01.2635	110040	00.9724	110099	01.0664
100131	01.2524	100199	01.2705	100262	01.2898	110041	01.1800	110100	01.1012
100132	01.3023	100200	01.3171	100263	01.5212	110042	01.0816	110101	01.0094
100134	01.0504	100203	01.1979	100264	01.3108	110043	01.4680	110103	00.9674
100135	01.5351	100204	01.5446	100265	01.2224	110044	01.0848	110104	01.1572
100137	01.1162	100206	01.3476	100266	01.3155	110045	00.9967	110105	01.0928
100138	00.9955	100207	01.4004	100267	01.3095	110046	01.2307	110107	01.5015
100139	01.1226	100208	01.3973	100268	01.2788	110048	01.1659	110108	00.8701
100140	01.1258	100209	01.4695	100269	01.2810	110049	01.1213	110109	01.0034
100142	01.1146	100210	01.4522	100270	00.9352	110050	01.1629	110111	01.0086
100143	01.0747	100211	01.2858	100271	01.4719	110051	00.9726	110112	00.9942
100144	01.1562	100212	01.4424	100273	01.1921	110052	00.8655	110113	01.0228
100145	01.2865	100213	01.4528	100275	01.1876	110054	01.1904	110114	01.0889
100146	01.1476	100217	01.1914	100276	01.4205	110055	00.9135	110115	01.4302
100147	01.0992	100218	00.8527	100277	01.0763	110056	01.0043	110117	01.0764
100149	01.3239	100219	01.4248	110001	01.1855	110059	01.2616	110118	00.8769
100150	01.3076	100220	01.7390	110002	01.2440	110061	00.9488	110120	01.0297
100151	01.7260	100221	01.5779	110003	01.2103	110062	00.9734	110121	00.9419
100152	01.2723	100222	01.2935	110004	01.2227	110063	01.0341	110122	01.2790
100154	01.4167	100223	01.3733	110005	01.2171	110064	01.1648	110123	01.0004
100156	01.1414	100224	01.2719	110006	01.2654	110065	01.0560	110124	01.0718
100157	01.4546	100225	01.2690	110007	01.3966	110066	01.2430	110125	01.1003
100159	01.0095	100226	01.2950	110008	01.2140	110069	01.1134	110127	00.9875
100160	01.1879	100227	01.0423	110009	01.0999	110070	00.9481	110128	01.1227
100161	01.3653	100228	01.1460	110010	01.8650	110071	01.0185	110129	01.4164
100162	01.2880	100229	01.5490	110011	01.1722	110072	00.9675	110130	00.9495
100164	00.8874	100230	01.2336	110013	01.0394	110073	01.1041	110131	01.0497
100165	00.9487	100231	01.5583	110014	01.1843	110074	01.2617	110132	01.0235
100166	01 3883	100232	01 1481	110015	01.0753	110075	01 1909	110133	00.9943
100167	01 3597	100234	01 2742	110016	01 1724	110076	01 3015	110134	00.9023
100168	01 2821	100235	01 2839	110017	00 9816	110077	01 0746	110135	01.0616
100169	01 6857	100236	01 3544	110018	01 1201	110078	01 4811	110136	01.0951

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
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TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 6 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
110140	00.8717	120001	01.5672	130036	01.1881	140043	01.1801	140104	00.9694
110141	00.9545	120002	01.1204	130037	01.2193	140045	00.9917	140105	01.2525
110142	01.0959	120003	01.0774	130039	01.1631	140046	01.2089	140107	00.9242
110143	01.2021	120004	01.3954	130040	00.9936	140047	01.0538	140108	01.1471
110144	01.1627	120005	01.1450	130043	01.0501	140048	01.1731	140109	01.0548
110146	00.9188	120006	01.1496	130044	00.9969	140049	01.2780	140110	01.2489
110149	01.0194	120007	01.5419	130045	00.9392	140051	01.1846	140112	01.1113
110150	01.2060	120009	00.9821	130048	00.9550	140052	01.1876	140113	01.4513
110151	01.1037	120010	01.5164	130049	01.2427	140053	01.5627	140114	01.2250
110152	01.0084	120011	01.3108	130050	00.5378	140054	01.3191	140115	01.1316
110153	00.9676	120012	00.9551	130051	01.0698	140055	01.0063	140116	01.2625
110154	00.9699	120014	01.1612	130054	01.0021	140058	01.1015	140117	01.1747
110155	01.0188	120015	01.0017	130056	01.0284	140059	01.0943	140118	01.4440
110156	01.0121	120016	00.9372	130058	00.9877	140061	01.1071	140119	01.5016
110157	01.2503	120018	00.8528	140001	01.3063	140062	01.2364	140120	01.2865
110161	01.1975	120019	01.0571	140002	01.1993	140063	01.2619	140121	00.9445
110162	00.8665	120021	00.9903	140003	00.9274	140064	01.2325	140122	01.3288
110163	01.2624	120022	01.5462	140004	01.0852	140065	01.2290	140123	01.2073
110164	01.2953	120024	01.0516	140005	00.9143	140066	01.0949	140124	01.1779
110165	01.1722	120026	01.3695	140007	01.2109	140067	01.5648	140125	01.2059
110166	01.3275	130001	00.9551	140008	01.3202	140068	01.2799	140126	01.4736
110168	01.4330	130002	01.3596	140010	01.3233	140069	01.1122	140127	01.2301
110169	00.7028	130003	01.2511	140011	01.1274	140070	01.4301	140128	01.0623
110171	01.2893	130005	01.3631	140012	01.2320	140072	01.1256	140129	01.0413
110172	01.1415	130006	01.6111	140013	01.2974	140074	01.0280	140130	01.1470
110174	00.9805	130007	01.4890	140014	00.9915	140075	01.3410	140132	01.4308
110175	01.0223	130008	00.9153	140015	01.1736	140077	01.0806	140133	01.3767
110176	01.1354	130009	01.0896	140016	01.0430	140079	01.2018	140135	01.1809
110177	01.3549	130010	00.8872	140017	01.3301	140080	01.6560	140137	00.9945
110178	01.0294	130011	01.2751	140018	01.3260	140081	01.1090	140138	01.1609
110179	01.1457	130012	00.9098	140019	00.9890	140082	01.2912	140139	01.0809
110181	00.9759	130013	01.2561	140023	01.0938	140083	01.2046	140140	01.0462
110183	01.1992	130014	01.2788	140024	00.9976	140084	01.2469	140141	01.0199
110184	01.2201	130015	01.0967	140025	01.1235	140085	01.0996	140143	01.0825
110185	01.1143	130016	00.9790	140026	01.1484	140086	01.1417	140144	01.0417
110186	01.1386	130017	01.0426	140027	01.1270	140087	01.3378	140145	01.1185
110187	01.0278	130018	01.4955	140029	01.2734	140088	01.4925	140146	00.9902
110188	01.2533	130019	01.2297	140030	01.4277	140089	01.1885	140147	01.0943
110189	01.0751	130021	01.0456	140031	00.9833	140090	01.3080	140148	01.4420
110190	01.1066	130022	01.2346	140032	01.1427	140091	01.3959	140150	01.3570
110191	01.1514	130024	01.1650	140033	01.2221	140093	01.2307	140151	01.1573
110192	01.2749	130025	00.9722	140034	01.1499	140094	01.1830	140152	01.1047
110193	01.0823	130026	01.1154	140035	01.0114	140095	01.2637	140154	01.2078
110194	00.9448	130027	00.8783	140036	01.1217	140097	00.9899	140155	01.2205
110195	01.0722	130028	01.2319	140037	01.0177	140098	01.2732	140156	00.9089
110198	01.3035	130029	01.0759	140038	01.0753	140099	01.2394	140158	01.3189
110200	01.6470	130030	01.0137	140039	01.1011	140100	01.2077	140159	01.2061
110201	01.2743	130031	01.1024	140040	01.2410	140101	01.1034	140160	01.2625
110202	01.0261	130034	00.9493	140041	01.0695	140102	00.9977	140161	01.0588
110203	01.0090	130035	01.0518	140042	01.0293	140103	01.1618	140162	01.2123

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 7 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
140164	01.1870	140230	01.0130	150013	01.0065	150069	01.2927	150130	01.1971
140165	01.0444	140231	01.9235	150014	01.2757	150070	01.0357	150132	01.3921
140166	01.1734	140232	00.9947	150015	01.1730	150071	01.2373	150133	01.2172
140167	01.0977	140233	01.4913	150017	01.4898	150072	01.2309	150134	01.3052
140168	01.0572	140234	01.1710	150018	01.1799	150073	00.9857	150135	00.8477
140170	01.0188	140236	01.1257	150019	01.2479	150074	01.4297	150136	00.9837
140171	00.9200	140239	01.5002	150020	01.0411	150075	01.2692	160001	01.1406
140172	01.4506	140240	01.1988	150021	01.5340	150076	01.0333	160002	01.3374
140173	01.0059	140241	00.9361	150022	01.1485	150077	01.1180	160003	01.0833
140174	01.2846	140242	01.3694	150023	01.3680	150078	01.0836	160005	01.1025
140176	01.1569	140243	00.8888	150024	01.2193	150079	01.0701	160007	01.0987
140177	01.2521	140245	01.0336	150025	01.3692	150081	01.0067	160008	01.1086
140179	01.2404	140246	01.0935	150026	01.1415	150082	01.3560	160009	01.1596
140180	01.4023	140247	00.9770	150027	01.0485	150083	00.7623	160012	01.1792
140181	01.2123	140250	01.2593	150029	01.1173	150084	01.5834	160013	01.1605
140182	01.3235	140251	01.3064	150030	01.1500	150085	00.9737	160014	01.0267
140184	01.1182	140252	01.2454	150031	01.0043	150086	01.2446	160016	01.2317
140185	01.3080	140253	01.3494	150032	01.6237	150088	01.1871	160018	00.9183
140186	01.1966	140258	01.2799	150033	01.4860	150089	01.2590	160020	01.1441
140187	01.3271	140271	01.0499	150034	01.2461	150090	01.3378	160021	01.0892
140188	00.9618	140273	01.1660	150035	01.3174	150091	01.0972	160023	01.1595
140189	01.1037	140275	01.2201	150036	01.0274	150092	01.0863	160024	01.2384
140190	01.0691	140276	01.8432	150037	01.2200	150094	01.0055	160025	01.6454
140191	01.2072	140280	01.1579	150038	01.1979	150095	01.0416	160026	01.1096
140192	01.1695	140281	01.4255	150039	01.0636	150096	01.0317	160027	01.1796
140193	00.9755	140285	01.2515	150042	01.2310	150097	01.0639	160028	01.2393
140197	01.3676	140286	01.1747	150043	01.1361	150098	00.9996	160029	01.2377
140199	01.0453	140288	01.5218	150044	01.1864	150099	01.3039	160030	01.2420
140200	01.3925	140289	01.3088	150045	01.1210	150100	01.4858	160031	01.1464
140202	01.2309	140290	01.4243	150046	01.2915	150101	01.0965	160032	01.0707
140203	01.1662	140291	01.2127	150047	01.4607	150102	01.0252	160033	01.2486
140204	01.1555	140292	01.3377	150048	01.2139	150103	01.0649	160034	01.0244
140205	01.0130	140293	00.9171	150049	01.0541	150104	01.1247	160035	01.0962
140206	01.1243	140294	01.1199	150050	01.0628	150105	01.1439	160036	01.1830
140207	01.2544	140295	00.9662	150051	01.2467	150106	01.0667	160037	01.0839
140208	01.4150	140297	01.3455	150052	01.0790	150109	01.3193	160038	01.2015
140209	01.4469	140298	01.5197	150053	01.0889	150110	00.8680	160039	01.0298
140210	01.0309	140299	00.9721	150054	01.1507	150111	01.1161	160040	01.2106
140211	01.1589	150001	01.1275	150056	01.5537	150112	01.1936	160041	01.1438
140212	01.1664	150002	01.2868	150057	02.4630	150113	01.1584	160043	01.0770
140213	01.2142	150003	01.5603	150058	01.4191	150114	01.0592	160044	01.2985
140215	01.1328	150004	01.2192	150059	01.1167	150115	01.2521	160045	01.4910
140217	01.2410	150005	01.2045	150060	01.1888	150122	01.1347	160046	01.0543
140218	01.0212	150006	01.2125	150061	01.1192	150123	00.9799	160047	01.3226
140220	01.1770	150007	01.1268	150062	00.9993	150124	01.1750	160048	01.0412
140223	01.4053	150008	01.3391	150063	01.1673	150125	01.3474	160049	00.8780
140224	01.3349	150009	01.2954	150064	01.1056	150126	01.5273	160050	01.0889
140226	00.9199	150010	01 1688	150065	01.1524	150127	01.1262	160051	01.3141
140228	01.5415	150011	01 2044	150066	01.1261	150128	01.1707	160052	01.0144
140229	01.0548	150012	01 4650	150067	00.9948	150129	01.2596	160053	01.1468

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 8 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
160054	01.0480	160110	01.4026	170020	01.1899	170079	00.9687	170142	01.2132
160055	01.0027	160111	01.2032	170021	00.9748	170080	00.9874	170143	01.1426
160056	01.0592	160112	01.2666	170022	01.1419	170081	01.1715	170144	01.4051
160057	01.3153	160113	01.1109	170023	01.3262	170082	00.9772	170145	01.1732
160058	01.5465	160114	01.0832	170024	01.2391	170084	00.9369	170146	01.2926
160059	01.2044	160115	01.1020	170025	01.3018	170085	01.0797	170147	01.2252
160060	01.1088	160116	01.1584	170026	01.0461	170086	01.4784	170148	01.2935
160061	01.0164	160117	01.2799	170027	01.1964	170087	01.3399	170150	01.0479
160062	01.1222	160118	01.0606	170030	00.9795	170088	00.9953	170151	01.1241
160063	01.1716	160119	00.8994	170031	00.9752	170089	01.0438	170152	01.0143
160064	01.3339	160120	01.0515	170032	01.1101	170090	01.0101	170159	00.9501
160065	01.1473	160122	01.1385	170033	01.1907	170092	00.9634	170160	00.9952
160066	01.0809	160123	01.1113	170034	00.9890	170093	01.1004	170164	01.2262
160067	01.2318	160124	01.2006	170035	00.9374	170094	01.0267	170166	01.1856
160068	01.0410	160126	01.1211	170036	00.9222	170095	01.1956	170168	01.0277
160069	01.3127	160129	01.1700	170037	01.1111	170097	00.9712	170170	01.1558
160070	01.0856	160130	01.0670	170038	01.0471	170098	01.0678	170171	01.1253
160071	01.1180	160131	01.1637	170039	01.1408	170099	01.2605	170172	00.9404
160072	01.1161	160132	01.0873	170040	01.3805	170100	00.8717	170173	00.9624
160073	00.9924	160133	01.1028	170041	01.0321	170101	01.1337	170174	00.9562
160074	01.0105	160134	00.9505	170043	01.0477	170102	01.0512	170175	01.2534
160075	01.0384	160135	00.9710	170044	01.2760	170103	01.2206	170176	01.3569
160076	00.9378	160138	01.0288	170045	01.0535	170104	01.3590	180001	01.1550
160077	01.0485	160140	01.0573	170046	00.9405	170105	01.0399	180002	01.0806
160079	01.2908	160141	01.0151	170049	01.2638	170106	01.1198	180004	01.1600
160080	01.1009	160142	01.1676	170050	00.9493	170108	01.1704	180005	01.0694
160081	01.1724	160143	01.0928	170051	01.0608	170109	01.1115	180006	00.8939
160082	01.6025	160145	01.0644	170052	01.0801	170110	01.0022	180007	01.3148
160083	01.4305	160146	01.2807	170053	00.9796	170112	01.0052	180009	01.1329
160085	01.0524	160147	01.2548	170054	01.2082	170113	01.1104	180010	01.6060
160086	01.0167	160151	01.0762	170055	00.9645	170114	01.0800	180011	01.1726
160088	01.1119	160152	01.1186	170056	01.0185	170115	01.1392	180012	01.2173
160089	01.2063	160153	01.4845	170057	01.0602	170116	01.1773	180013	01.2867
160090	01.0412	170001	01.1852	170058	01.0709	170117	01.0031	180014	01.5874
160091	01.0912	170003	01.1862	170060	00.9524	170119	01.0104	180015	01.1009
160092	00.9897	170004	01.1487	170061	01.1041	170120	01.2286	180016	01.2544
160093	00.9989	170006	01.1579	170062	00.9795	170121	00.8371	180017	01.2369
160094	01.1485	170007	01.1675	170063	00.9123	170122	01.7630	180018	01.2370
160095	01.1354	170008	01.0131	170064	01.2860	170123	01.4546	180019	01.1542
160097	01.1798	170009	01.1327	170066	00.9438	170124	01.1080	180020	01.0357
160098	01.0849	170010	01.1871	170067	01.0661	170125	00.9275	180021	00.9495
160099	01.1140	170011	01.2940	170068	01.1528	170126	00.9533	180023	00.8905
160101	01.2119	170012	01.3988	170069	00.9418	170128	01.1008	180024	01.0288
160102	01.2886	170013	01.2788	170070	00.9553	170131	01.1502	180025	01.1300
160103	00.9548	170014	01.1145	170072	01.0002	170133	01.1642	180026	01.0604
160104	01.1654	170015	01.0938	170073	01.1980	170134	01.0014	180027	01.0908
160106	01.0779	170016	01.4875	170074	01.1606	170137	01.1660	180028	00.9919
160107	01.0992	170017	01.1674	170075	00.8843	170138	01.2746	180029	01.2093
160108	01.2274	170018	01 0486	170076	01.0840	170139	01.0081	180030	01.0492
160109	00.9812	170019	01.2513	170077	01.0579	170140	01.0089	180031	01.0400

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 9 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
180032	00.9371	180103	01.6040	190029	01.2946	190119	01.0479	190189	01.2793
180033	01.0639	180104	01.3673	190033	00.9371	190120	00.9343	190190	01.0307
180034	01.0369	180105	00.9402	190034	01.2125	190122	01.2179	190191	01.1698
180035	01.3421	180106	00.8710	190035	01.3549	190124	01.3275	190193	01.1507
180036	01.0771	180108	00.9190	190036	01.5463	190125	01.2714	190194	01.1226
180037	01.2917	180115	01.0914	190037	00.9928	190127	01.3421	190195	00.9706
180038	01.2500	180116	01.2074	190039	01.3654	190128	00.8993	190196	00.9526
180040	01.7179	180117	01.2606	190040	01.3404	190130	00.9643	190197	01.1773
180041	01.0255	180118	01.0135	190041	01.4523	190131	01.1187	190198	01.1144
180042	01.0116	180120	00.9307	190043	01.0938	190132	01.0629	190199	01.3683
180043	01.1179	180121	01.1098	190044	01.0623	190133	01.0375	190200	01.4791
180044	01.1004	180122	00.9916	190045	01.2129	190134	00.9511	190201	01.1218
180045	01.1483	180123	01.3289	190046	01.3685	190135	01.3329	190202	01.2678
180046	01.0725	180124	01.2821	190047	01.1161	190136	00.9949	190203	01.5882
180047	00.9858	180125	01.0083	190048	01.0780	190138	00.7716	190204	01.3553
180048	01.0993	180126	01.0204	190049	01.0355	190140	00.9946	190205	01.2211
180049	01.2517	180127	01.1203	190050	01.0483	190142	01.0735	190206	01.3930
180050	01.2285	180128	01.0655	190053	01.0551	190144	01.1434	190207	01.1590
180051	01.2232	180129	01.1925	190054	01.3167	190145	00.9979	190208	00.8284
180053	00.9955	180130	01.3399	190059	00.9713	190146	01.4444	190209	00.8899
180054	01.0423	180132	01.2987	190060	01.2398	190147	00.9685	190210	00.8947
180055	01.0334	180133	01.2242	190064	01.4100	190148	00.8544	190211	00.9553
180056	01.0446	180134	01.1823	190065	01.4177	190149	01.0301	200001	01.3271
180058	00.8984	180136	01.3316	190071	00.9626	190151	01.1527	200002	01.0250
180059	00.9844	180137	01.7486	190075	01.2756	190152	01.3139	200003	00.9700
180060	00.9569	180138	01.2374	190077	00.9543	190155	00.9795	200005	00.9143
180062	00.8958	180139	01.0060	190078	01.1476	190156	00.9136	200006	01.0278
180063	01.0098	190001	01.0246	190079	01.2905	190158	01.1976	200007	00.9661
180064	01.1055	190002	01.5396	190081	00.8902	190160	01.1151	200008	01.2230
180065	00.9494	190003	01.2789	190083	00.9009	190161	01.0166	200009	01.6207
180066	01.1168	190004	01.1841	190086	01.1851	190162	01.1666	200012	01.1231
180067	01.5752	190005	01.2047	190088	01.1965	190164	01.1101	200013	01.1422
180069	01.1108	190006	01.2166	190089	01.1150	190165	00.9899	200015	01.2565
180070	01.0897	190007	01.0448	190090	01.2253	190166	01.0222	200016	01.0661
180072	01.0726	190008	01.4087	190092	01.1208	190167	01.3214	200017	01.2106
180075	00.9908	190009	01.0447	190095	01.0246	190170	00.9768	200018	01.1641
180078	01.1165	190010	01.0936	190098	01.3255	190173	01.3530	200019	01.2584
180079	00.9943	190011	01.1390	190099	01.2625	190175	01.1946	200020	01.0341
180080	01.1568	190012	01.0377	190102	01.4154	190176	01.3734	200021	01.1112
180081	01.3276	190013	01.2386	190103	00.9501	190177	01.4074	200023	00.9217
180085	01.2538	190014	01.0045	190106	01.1601	190178	00.9752	200024	01.1592
180087	01.0048	190015	01.2060	190109	01.0440	190179	00.8637	200025	01.1514
180088	01.5170	190017	01.2391	190110	00.9325	190180	01.0747	200026	01.0408
180092	01.1423	190018	01.2385	190111	01.4779	190182	01.0610	200027	01.1764
180093	01.2894	190019	01.4337	190112	01.2908	190183	01.1511	200028	01.0158
180094	00.9790	190020	01.1320	190113	01.1900	190184	00.9836	200031	01.1646
180095	01.1118	190023	00.9679	190114	01.0378	190185	01.2350	200032	01.2545
180099	01.0065	190025	01.2382	190115	01.2665	190186	00.9292	200033	01.6680
180101	01.2740	190026	01.2435	190116	01.2007	190187	00.9967	200034	01.2040
180102	01.3310	190027	01.3951	190118	01.0575	190188	00.9817	200037	01.1398

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: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 10 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
200038	01.0851	210038	01.3036	220046	01.3031	220110	01.8128	230040	01.2644
200039	01.2639	210039	01.1058	220048	01.1782	220111	01.1799	230041	01.1071
200040	01.0723	210040	01.2802	220049	01.1913	220114	01.0542	230042	01.1405
200041	01.1799	210043	01.1595	220050	01.0455	220115	01.3025	230043	00.9089
200043	00.6989	210044	01.2073	220051	01.1479	220116	01.7381	230046	01.6094
200044	01.1706	210045	01.0513	220052	01.2419	220117	00.9812	230047	01.1770
200047	00.9878	210046	01.1099	220053	01.1977	220118	01.8014	230051	00.9837
200050	01.1718	210047	00.7927	220055	01.1926	220119	01.3055	230053	01.3603
200051	01.0172	210048	01.1006	220057	01.2962	220120	00.9739	230054	01.4609
200052	01.1182	210049	01.2152	220058	01.0754	220123	00.9360	230055	01.1062
200055	01.0932	210051	01.2404	220060	01.0922	220126	01.2550	230056	00.9808
200058	00.7230	210054	01.2329	220061	01.2543	220128	01.1743	230058	01.1595
200062	00.9998	210055	01.1807	220062	00.9602	220129	01.0848	230059	01.6445
200063	01.2211	210056	01.3683	220063	01.1439	220131	01.1474	230060	01.1540
200066	01.2462	210057	01.1392	220064	01.1743	220133	00.8701	230062	01.1065
210001	01.2500	210058	01.6360	220065	01.1214	220135	01.0906	230063	01.2454
210002	01.6702	210059	01.1894	220066	01.2588	220153	01.0502	230065	01.2582
210003	01.2123	220001	01.1490	220067	01.2060	220154	00.9777	230066	01.2106
210004	01.2475	220002	01.3427	220068	00.6451	220156	01.1909	230068	01.2933
210005	01.2323	220003	01.0356	220070	01.1210	220162	01.2289	230069	01.1633
210006	01.0588	220004	01.2105	220071	01.6761	220163	01.8001	230070	01.3195
210007	01.4202	220006	01.2152	220073	01.2038	220171	01.3699	230071	00.6698
210008	01.1871	220008	01.2119	220074	01.1243	230001	01.2323	230072	01.1435
210009	01.4056	220010	01.1795	220075	00.7428	230002	01.2097	230075	01.2590
210010	01.1360	220011	01.2678	220076	01.1712	230003	01.1508	230076	01.1774
210011	01.2486	220012	01.2424	220077	01.5361	230004	01.5778	230077	01.8157
210012	01.2076	220015	01.2094	220079	01.1764	230005	01.1583	230078	01.0547
210013	01.2659	220016	01.2096	220080	01.1689	230006	00.8836	230080	01.2486
210015	01.2158	220017	01.2164	220081	01.0319	230007	01.1008	230081	01.2076
210016	01.5990	220019	01.1492	220082	01.2303	230012	00.9552	230082	01.0986
210017	01.1135	220020	01.1284	220083	01.1516	230013	01.2391	230084	01.1311
210018	01.2779	220021	01.1566	220084	01.1930	230014	01.0106	230085	01.1149
210019	01.2844	220022	00.5978	220086	01.5377	230015	01.1052	230086	01.0000
210021	01.1678	220023	01.2297	220088	01.5182	230017	01.4853	230087	01.1028
210022	01.1783	220024	01.2145	220089	01.2893	230019	01.4056	230089	01.2733
210023	01.2354	220025	01.1020	220090	01.1705	230020	01.3589	230090	01.3343
210024	01.2055	220026	01.2385	220092	01.2147	230021	01.3057	230092	01.2434
210025	01.1730	220028	01.3254	220094	01.2016	230022	01.2469	230093	01.0762
210026	01.2693	220029	01.1427	220095	01.1008	230024	01.5164	230095	01.0950
210027	01.1890	220030	01.0547	220097	01.0540	230027	01.0814	230096	01.1197
210028	01.0250	220031	01.6333	220098	01.2120	230029	01.4378	230097	01.2878
210029	01.2455	220033	01.1885	220099	01.1343	230030	01.2244	230098	01.2861
210030	01.0578	220034	01.1108	220100	01.2779	230031	01.3760	230099	01.1812
210031	01.6195	220035	01.1738	220101	01.2651	230032	01.8177	230100	01.0980
210032	01.0832	220036	01.4570	220102	00.6628	230034	01.1508	230101	01.0978
210033	01.1086	220038	01.2573	220104	01.2185	230035	01.1041	230102	00.4432
210034	01.1762	220040	01.2518	220105	01.1407	230036	01.2301	230103	01.0963
210035	01.1123	220041	01.1388	220106	01.1069	230037	00.9743	230104	01.4005
210036	01.2192	220042	01.1588	220107	01.1315	230038	01.5730	230105	01.4956
210037	01.2229	220045	01.1866	220108	01.0934	230039	01.2623	230106	01.1447

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 11 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
230107	00.9604	230172	01.2134	230264	01.2600	240052	01.2106	240110	01.1553
230108	01.1296	230173	01.2512	230266	01.3260	240053	01.4764	240111	01.0178
230110	01.1488	230174	01.2578	230269	01.2401	240056	01.3100	240112	01.1671
230111	01.0260	230175	01.0574	230270	01.2400	240057	01.6681	240114	01.1186
230113	00.9994	230176	01.2130	230273	01.3623	240058	01.0060	240115	01.3643
230114	00.8136	230178	01.0648	230275	01.0276	240059	01.1437	240116	00.9403
230115	00.9371	230179	00.9308	230276	01.0701	240061	01.4864	240117	01.1756
230116	00.9265	230180	01.1275	230277	01.2053	240062	01.0441	240118	01.0450
230117	01.7662	230181	01.0020	240001	01.4752	240063	01.3596	240119	00.8478
230118	01.2195	230184	01.1856	240002	01.5859	240064	01.2233	240121	00.9233
230119	01.1278	230186	00.9609	240003	01.2923	240065	01.0499	240122	01.0250
230120	01.0753	230188	01.1253	240004	01.3841	240066	01.3105	240123	01.0383
230121	01.2390	230189	00.9640	240005	00.9075	240069	01.1875	240124	01.0086
230122	01.2920	230190	01.0684	240006	01.2614	240071	01.1142	240125	00.9502
230124	01.1471	230191	00.9456	240007	01.0681	240072	01.0250	240127	01.0250
230125	01.3461	230193	01.3177	240008	01.0971	240073	01.0259	240128	01.1014
230128	01.4140	230194	01.2242	240009	01.0855	240074	01.0286	240129	00.8985
230129	01.8019	230195	01.3406	240010	01.8125	240075	01.2242	240130	01.0158
230130	01.4853	230197	01.2390	240011	01.0442	240076	01.1250	240132	01.2194
230132	01.3012	230199	01.1769	240013	01.2457	240077	00.9811	240133	01.1709
230133	01.1744	230201	01.1107	240014	01.0964	240078	01.3282	240134	00.9773
230134	01.1363	230204	01.3340	240016	01.3577	240079	01.1454	240135	00.9666
230135	01.2360	230205	01.1490	240017	01.2113	240080	01.3454	240136	00.8968
230137	01.0968	230207	01.1626	240018	01.2554	240081	01.2191	240137	01.1609
230138	00.9182	230208	01.2287	240019	01.4254	240082	01.2441	240138	00.9389
230140	01.0980	230211	00.9818	240020	01.2441	240083	01.2231	240139	01.0702
230141	01.4334	230212	01.1257	240021	00.9870	240084	01.2572	240140	00.9093
230142	01.1850	230213	01.0040	240022	01.0474	240085	00.9289	240141	00.9720
230143	01.3214	230216	01.3483	240023	01.0351	240086	01.1251	240142	01.0624
230144	01.1631	230217	01.2162	240025	01.2168	240087	01.1424	240143	01.0916
230145	01.1854	230219	00.9243	240026	01.2874	240088	01.4273	240144	01.0584
230146	01.1759	230221	01.2517	240027	01.0515	240089	01.0153	240145	00.9712
230147	01.2685	230222	01.2792	240028	01.1322	240090	01.1265	240146	01.0098
230149	01.2210	230223	01.3090	240029	01.1638	240091	01.0781	240148	00.9493
230150	01.7011	230224	01.1732	240030	01.3208	240093	01.2952	240150	00.9919
230151	01.3493	230227	01.2934	240031	00.9033	240094	01.0078	240152	00.9565
230153	01.0322	230228	01.2205	240036	01.4006	240096	01.0484	240153	00.9668
230154	01.1210	230230	01.3156	240037	01.0619	240097	01.0630	240154	01.0259
230155	01.0069	230232	00.9951	240038	01.4343	240098	00.9916	240155	01.0820
230156	01.4988	230235	01.0567	240040	01.1302	240099	01.0479	240156	00.9220
230157	01.3860	230236	01.2832	240041	01.1484	240100	01.2250	240157	01.0501
230158	00.9976	230237	01.1464	240043	01.1360	240101	01.2317	240158	01.2111
230159	01.2319	230239	01.1883	240044	01.1148	240102	01.0609	240160	00.9107
230161	00.8706	230241	01.1166	240045	01.0771	240103	01.1869	240161	00.9528
230162	00.9963	230244	01.3085	240046	01.5108	240104	01.2261	240162	01.0596
230163	01.0125	230253	01.0707	240047	01.2914	240105	00.9596	240163	00.8987
230165	01.6214	230254	01.2420	240048	01.2763	240106	01.2623	240165	00.9382
230167	01.2581	230256	00.9937	240049	01.5779	240107	00.9636	240166	01.1269
230169	01.2748	230257	01.0037	240050	01.0054	240108	01.0885	240167	00.8601
230171	01.1022	230259	01.0852	240051	00.9784	240109	01.0809	240169	00.9738

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
240170	01.1482	250036	00.9640	250099	01.1965	260014	01.5553	260077	01.3781
240171	01.0681	250037	00.9491	250100	01.1821	260015	01.0667	260078	01.1251
240172	01.2199	250038	00.9016	250101	00.8618	260016	01.1178	260079	01.0978
240173	01.0983	250039	00.9842	250102	01.4066	260017	01.3084	260080	01.0829
240175	00.7980	250040	01.1278	250104	01.2284	260018	00.9989	260081	01.4311
240176	00.9469	250042	01.1309	250105	00.9185	260019	01.0261	260082	01.1748
240179	01.0643	250043	00.8970	250107	00.9239	260020	01.4785	260085	01.4172
240180	01.0214	250044	01.1538	250109	01.0104	260021	01.2640	260086	01.0305
240183	01.0885	250045	01.0962	250110	00.9910	260022	01.3993	260088	01.1315
240184	00.8906	250046	01.0500	250111	00.9012	260023	01.2827	260089	01.0573
240187	01.2053	250047	00.9516	250112	00.9744	260024	01.0998	260090	01.3311
240192	01.0119	250048	01.2592	250113	01.0471	260025	01.2261	260091	01.5431
240193	01.0472	250049	00.9879	250114	00.8071	260026	00.9989	260092	01.0681
240196	01.2948	250050	01.1135	250117	01.0520	260027	01.4635	260094	01.0954
240200	00.8976	250051	00.8972	250118	01.1190	260029	01.1729	260095	01.3749
240201	01.0710	250057	01.1037	250119	01.0128	260030	01.1580	260096	01.3102
240205	00.9013	250058	01.0790	250120	01.0110	260031	01.3292	260097	01.1932
240206	00.9012	250059	01.0238	250121	01.1080	260032	01.5113	260100	01.1981
240207	01.2319	250060	00.8359	250122	01.2043	260033	01.3094	260102	01.0103
240210	01.2803	250061	00.9656	250123	01.1054	260034	01.0149	260103	01.2787
250001	01.3469	250062	00.9944	250124	00.8919	260035	01.0088	260104	01.5470
250002	00.8617	250063	00.8954	250125	01.1460	260036	01.0206	260105	01.7865
250003	00.8954	250065	00.9546	250126	00.9945	260037	01.2515	260107	01.2857
250004	01.3607	250066	00.9089	250127	00.8645	260039	01.2991	260108	01.6530
250005	00.9823	250067	01.0587	250128	01.0848	260040	01.4570	260109	01.0259
250006	01.0475	250068	00.8544	250129	01.0525	260041	00.8920	260110	01.4385
250007	01.1470	250069	01.2379	250131	01.0033	260042	01.1687	260111	01.0718
250008	00.9608	250071	00.9831	250132	00.9891	260044	01.0906	260112	01.4213
250009	01.0803	250072	01.1582	250133	00.8398	260047	01.2710	260113	01.1706
250010	01.1409	250073	00.9722	250134	01.0782	260048	01.2197	260115	01.2022
250012	00.9557	250075	00.9111	250136	00.8958	260049	00.9372	260116	01.1206
250014	01.1582	250076	00.9614	250137	00.9054	260050	01.0605	260119	01.2248
250015	00.9950	250077	00.9479	250138	01.0652	260051	01.1575	260120	01.2708
250016	00.8737	250078	01.3712	250139	00.9446	260052	01.1675	260122	01.1750
250017	00.9703	250079	00.8696	250140	00.8288	260053	01.1069	260123	00.9583
250018	01.0944	250081	01.1537	250141	01.2442	260054	01.3378	260127	00.9965
250019	01.2339	250082	01.1989	250142	00.8245	260055	01.1639	260128	01.0326
250020	00.9916	250083	00.8949	260001	01.5380	260057	01.0656	260129	01.1200
250021	00.9217	250084	01.1155	260002	01.3472	260059	01.0152	260131	01.2479
250023	00.8864	250085	00.9823	260003	01.0247	260061	01.0932	260134	01.1832
250024	00.9797	250086	00.9767	260004	01.0232	260062	01.2264	260137	01.2492
250025	01.0385	250088	01.0898	260005	01.3155	260063	01.1420	260138	01.6492
250027	00.9541	250089	00.9813	260006	01.2208	260064	01.3240	260141	01.7724
250029	00.8742	250091	01.0194	260007	01.1702	260065	01.4410	260142	01.2159
250030	00.9808	250093	01.1580	260008	01.2636	260066	00.9855	260143	01.1913
250031	01.1923	250094	01.1626	260009	01.2064	260067	00.9959	260146	00.9197
250032	01.1959	250095	01.0908	260010	01.5824	260068	01.7527	260147	01.0055
250033	01.0062	250096	01.1155	260011	01.3410	260070	01.0730	260148	00.9205
250034	01.2990	250097	01.1591	260012	01.0147	260073	00.9711	260158	01.1263
250035	00.8760	250098	00.9379	260013	01.0642	260074	01.2394	260159	01.1405

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 13 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
260160	01.1319	270032	01.1216	280021	01.1772	280080	00.9460	290020	01.0082
260162	01.1436	270033	00.9464	280022	00.9877	280081	01.3422	290021	01.4519
260163	01.1910	270035	01.0594	280023	01.3118	280082	01.2615	290022	01.5912
260164	01.1461	270036	00.9815	280024	00.8944	280083	01.0321	290027	01.0669
260165	01.0704	270039	00.9909	280025	00.9698	280084	01.0317	290029	00.8480
260166	01.1861	270040	01.1532	280026	01.1568	280085	01.3717	290031	00.9180
260172	01.0290	270041	01.0569	280028	00.9366	280088	01.5833	290032	01.3718
260173	01.1627	270043	00.8314	280029	01.0402	280089	00.9443	290033	01.1389
260175	01.1522	270044	01.0420	280030	01.5824	280090	00.9986	300001	01.2740
260176	01.3512	270046	00.9791	280031	01.1400	280091	01.0526	300002	00.9334
260177	01.2659	270047	00.8655	280032	01.1483	280092	00.9397	300003	01.7880
260178	01.3840	270048	01.1106	280033	00.9372	280093	00.9106	300005	01.3548
260179	01.4743	270049	01.2996	280034	01.2533	280094	00.9825	300006	01.2104
260180	01.4663	270050	00.9153	280035	00.9439	280097	00.8904	300007	01.1753
260182	01.1298	270051	01.1883	280037	01.1656	280098	01.0034	300008	01.2624
260183	01.3236	270052	01.0532	280038	01.0941	280101	00.9822	300009	01.1168
260186	01.1573	270053	00.9883	280039	01.0706	280102	00.9515	300010	01.2443
260188	01.1459	270055	00.7334	280040	01.4450	280103	00.9408	300011	01.2268
260189	01.0158	270057	01.0982	280041	00.9692	280104	01.1041	300012	01.3046
260190	01.1729	270058	01.0844	280042	01.1082	280105	01.2109	300013	01.2108
260191	01.1984	270059	00.9234	280043	01.0705	280106	00.9271	300014	01.2481
260193	01.1994	270060	00.9451	280045	01.0519	280107	01.1387	300015	01.0365
260195	01.0249	270063	00.9048	280046	01.0962	280108	01.0468	300016	01.1779
260197	01.1899	270067	01.0653	280047	01.2489	280109	00.9304	300017	01.2472
260198	01.2505	270068	00.8883	280048	01.0883	280110	00.9996	300018	01.2758
260200	01.2195	270071	00.8924	280049	01.0702	280111	01.1765	300019	01.1841
260202	01.2357	270072	00.8223	280050	00.9797	280114	01.0069	300020	01.1648
270002	01.1870	270073	01.0960	280051	01.0671	280115	01.0089	300021	01.2607
270003	01.1638	270074	00.9211	280052	01.0460	280117	01.1066	300022	01.2132
270004	01.7564	270075	00.9359	280054	01.1895	280118	01.1240	300023	01.1750
270006	00.9926	270076	00.8901	280055	01.0021	280119	00.8953	300024	01.2416
270007	00.9382	270079	00.9230	280056	01.0548	280122	01.0478	300028	01.0946
270008	00.9986	270080	01.1373	280057	01.1049	280123	00.7744	300029	01.2310
270009	00.9634	270081	00.9963	280058	01.2343	290001	01.4053	300033	01.0988
270011	01.1028	270082	00.9113	280060	01.3290	290002	01.0193	300034	01.5549
270012	01.3567	270083	01.0409	280061	01.3152	290003	01.5904	310001	01.4945
270013	01.2143	280001	01.1823	280062	01.2063	290005	01.2386	310002	01.6890
270014	01.4498	280003	01.7271	280064	01.0692	290006	01.1054	310003	01.1817
270016	00.8805	280004	01.1553	280065	01.2204	290007	01.6987	310005	01.1780
270017	01.2127	280005	01.3788	280066	01.1314	290008	01.3612	310006	01.1307
270019	00.9146	280009	01.3700	280068	00.9954	290009	01.3799	310008	01.2225
270021	01.1529	280010	01.0665	280070	01.0204	290010	01.0788	310009	01.1449
270023	01.3397	280011	01.0731	280071	00.8609	290011	01.1149	310010	01.1967
270024	01.0458	280012	01.1407	280073	01.0450	290012	01.2495	310011	01.2358
270026	00.9430	280013	01.5004	280074	01.0831	290013	00.9336	310012	01.3846
270027	01.0324	280014	01.1062	280075	01.1708	290014	00.9842	310013	01.2784
270028	01.0596	280015	01.0510	280076	00.9701	290015	00.9881	310014	01.4737
270029	01.0696	280017	01.1866	280077	01.3000	290016	01.0931	310015	01.4470
270030	00.9926	280018	01.0080	280078	01.0020	290018	00.7968	310016	01.1799
270031	00.9249	280020	01.3949	280079	00.9437	290019	01.2521	310017	01.3039

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 14 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
310018	01.0827	310077	01.5243	320032	00.9976	330030	01.1788	330103	01.1956
310019	01.4819	310078	01.2216	320033	01.0792	330033	01.3041	330104	01.3608
310020	01.1652	310081	01.1640	320035	01.0455	330034	01.1876	330106	01.5466
310021	01.2114	310083	01.2080	320037	01.2433	330036	01.1593	330107	01.2265
310022	01.2057	310084	01.1819	320038	01.2534	330037	01.1235	330108	01.2490
310024	01.1899	310085	01.1727	320046	01.0650	330038	01.2119	330110	00.9890
310025	01.1007	310086	01.1848	320048	01.1904	330039	00.9628	330111	01.1845
310026	01.2655	310087	01.2364	320053	01.0820	330041	01.4872	330114	01.0119
310027	01.1835	310088	01.1992	320056	00.9046	330043	01.1934	330115	01.2291
310028	01.1598	310090	01.1898	320057	01.0394	330044	01.1930	330116	00.9880
310029	01.6781	310091	01.1957	320058	00.8777	330045	01.2435	330118	01.4741
310031	02.2722	310092	01.2317	320059	01.0789	330046	01.5013	330119	01.3441
310032	01.1249	310093	01.1057	320060	00.9393	330047	01.2716	330121	01.0515
310033	01.2002	310096	01.5448	320061	01.1505	330048	01.2643	330122	01.1828
310034	01.1470	310105	01.1157	320062	00.8915	330049	01.3773	330125	01.6888
310036	01.1624	310108	01.2088	320063	01.2430	330053	01.1009	330126	01.1144
310037	01.2029	310110	01.1735	320065	01.1663	330055	01.3019	330127	01.1783
310038	01.5241	310111	01.2165	320067	00.8606	330056	01.2636	330128	01.2561
310039	01.2098	310112	01.1717	320068	01.0115	330057	01.3872	330132	01.2311
310040	01.1388	310113	01.2249	320069	01.1078	330058	01.2420	330133	01.2546
310041	01.2543	310115	01.1714	320070	00.9270	330059	01.4545	330135	01.2021
310042	01.0976	310116	01.2228	320072	00.5207	330061	01.2777	330136	01.2987
310043	01.2242	310118	01.1741	320074	01.0489	330062	01.1207	330140	01.5588
310044	01.2543	310119	01.1616	320076	01.1456	330064	01.3226	330141	01.2171
310045	01.1984	310120	01.0259	320077	00.8077	330065	01.2195	330142	01.2115
310047	01.2620	310121	01.1907	330001	01.1665	330066	01.2094	330144	01.0470
310048	01.1649	310515	00.8678	330002	01.3319	330067	01.2835	330148	01.0871
310049	01.2557	310529	01.7322	330003	01.3422	330072	01.2889	330151	01.1396
310050	01.2042	310534	00.7976	330004	01.2727	330073	01.1739	330152	01.3299
310051	01.2678	320001	01.3498	330005	01.4907	330074	01.2310	330153	01.2966
310052	01.1808	320002	01.2236	330006	01.4417	330075	01.0585	330154	01.3704
310054	01.2899	320003	01.3261	330007	01.2059	330076	01.2654	330155	01.1633
310056	01.1709	320004	01.1359	330008	01.1248	330078	01.3311	330157	01.2698
310057	01.2394	320005	01.2641	330009	01.1991	330079	01.1642	330158	01.2163
310058	01.1642	320006	01.1637	330010	01.2010	330080	01.1982	330159	01.3380
310060	01.1870	320009	01.2833	330011	01.2328	330082	01.2485	330160	01.3393
310061	01.1711	320010	01.2732	330012	01.5306	330084	01.0520	330161	01.1382
310062	01.1221	320011	00.9973	330013	01.8761	330085	01.3427	330162	01.3028
310063	01.2551	320012	01.0668	330014	01.2816	330086	01.2453	330163	01.1875
310064	01.1869	320013	01.0556	330015	01.3279	330088	01.1411	330164	01.3490
310067	01.1971	320014	00.9114	330016	01.0949	330090	01.5540	330165	01.0154
310068	01.2185	320016	01.1068	330019	01.2830	330091	01.2756	330166	01.0250
310069	01.1341	320017	01.1234	330020	01.0765	330092	01.0241	330167	01.4294
310070	01.2224	320018	01.2128	330022	00.9979	330094	01.3462	330168	01.0810
310071	01.1953	320019	01.3355	330023	01.2743	330095	01.2409	330169	01.2799
310072	01.1719	320021	01.5795	330024	01.5946	330096	01.0794	330171	01.2717
310073	01.1825	320022	01.1730	330025	01.1148	330097	01.2583	330174	00.8985
310074	01.2226	320023	01.1490	330027	01.4786	330100	00.5892	330175	01.0826
310075	01.2104	320030	01.0785	330028	01.2995	330101	01.5501	330176	00.9234
310076	01.2651	320031	00.9348	330029	01.1995	330102	01.2577	330177	01.1135

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 15 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
330179	01.0086	330242	01.2957	330350	01.6548	340021	01.2685	340090	01.1373
330180	01.3044	330244	01.0669	330351	01.0879	340022	01.1024	340091	01.5342
330181	01.2386	330245	01.2115	330353	01.1883	340023	01.3732	340093	01.0743
330182	02.0691	330246	01.1885	330354	01.0985	340024	01.1950	340094	01.3638
330183	01.3581	330247	00.5514	330357	01.2897	340025	01.1359	340096	01.1249
330184	01.2498	330249	01.1800	330359	01.0693	340027	01.1484	340097	01.0472
330185	01.1776	330250	01.1825	330362	00.7376	340028	01.3639	340098	01.5440
330186	01.1240	330252	00.9544	330363	00.7227	340030	01.7328	340099	01.1930
330188	01.1672	330254	01.0180	330366	00.7253	340031	01.0693	340100	01.2832
330189	00.8124	330257	00.9898	330367	00.6858	340032	01.3582	340101	01.1355
330191	01.2424	330258	01.3246	330368	00.6530	340034	01.2962	340104	00.9324
330193	01.3872	330259	01.2192	330369	00.7055	340035	01.0841	340105	01.3974
330194	01.4836	330261	01.2669	330371	00.7514	340036	01.1008	340106	01.1690
330195	01.5264	330263	01.0926	330372	01.2278	340037	01.1979	340107	01.3236
330196	01.3081	330264	01.1532	330373	00.6473	340038	01.1907	340109	01.3097
330197	01.0570	330265	01.3091	330381	01.2279	340039	01.2165	340111	01.1819
330198	01.2765	330267	01.2031	330383	01.2440	340040	01.6696	340112	01.0125
330199	01.1440	330268	01.1750	330385	01.2034	340041	01.2367	340113	01.8408
330201	01.4095	330270	01.9233	330386	01.2091	340042	01.2541	340114	01.2802
330202	01.2047	330272	00.9849	330387	00.9076	340044	01.0330	340115	01.3262
330203	01.4326	330273	01.2374	330389	01.7908	340045	01.0260	340116	01.4914
330204	01.2179	330275	01.2472	330390	01.1234	340047	01.6689	340119	01.1954
330205	01.1343	330276	01.2537	330391	01.5415	340049	00.6346	340120	01.0843
330208	01.1384	330277	01.0870	330393	01.4914	340050	01.2361	340121	00.9966
330209	01.1539	330279	01.2286	330394	01.2621	340051	01.2752	340122	01.0581
330211	01.1254	330281	00.7779	330395	01.3096	340052	00.9860	340123	01.2139
330212	01.1840	330285	01.6527	330396	01.1893	340053	01.5339	340124	01.1802
330213	01.1584	330286	01.2660	330397	01.3069	340054	01.1036	340125	01.5181
330214	01.6134	330288	01.0909	330398	01.1746	340055	01.1664	340126	01.2768
330215	01.1846	330290	01.5587	330399	01.3173	340060	01.1660	340127	01.2360
330218	01.2690	330291	01.0618	340001	01.2313	340061	01.5825	340129	01.1954
330219	01.3950	330293	01.1342	340002	01.7021	340063	01.1316	340130	01.3243
330221	01.2994	330304	01.2238	340003	01.1793	340064	01.0862	340131	01.3042
330222	01.2461	330306	01.2909	340004	01.3897	340065	01.1209	340132	01.2775
330223	01.0564	330307	01.1361	340005	01.2774	340067	01.0826	340133	01.1941
330224	01.1969	330308	01.3405	340006	01.1373	340068	01.2777	340135	01.1298
330225	01.2535	330309	01.2945	340007	01.1518	340069	01.7099	340136	01.0934
330226	01.3166	330314	01.2114	340008	01.1953	340070	01.2888	340137	01.2018
330229	01.2127	330315	01.1292	340009	01.1246	340071	01.0447	340138	01.1962
330230	01.3091	330316	01.2234	340010	01.2957	340072	01.1121	340141	01.4942
330231	01.1580	330320	01.1982	340011	01.0401	340073	01.2766	340142	01.2384
330232	01.2823	330327	00.9168	340012	01.1340	340075	01.1487	340143	01.2915
330233	01.3748	330331	01.2041	340013	01.2470	340076	01.1180	340144	01.2639
330234	01.7279	330332	01.1984	340014	01.4887	340079	00.9932	340145	01.1808
330235	01.2287	330333	01.1965	340015	01.2518	340080	01.0873	340146	01.0115
330236	01.3726	330335	01.1435	340016	01.1401	340084	01.0522	340147	01.3049
330238	01.1549	330336	01 1666	340017	01.2153	340085	01 2909	340148	01.3624
330239	01 1485	330338	01 1687	340018	01.1585	340087	01 0779	340151	01.1357
330240	01 1247	330339	00 9631	340019	01.1289	340088	01 1097	340153	01.8566
330241	01.6904	330340	01 0796	340020	01.2667	340089	00 9769	340154	00.9148

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 16 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
340155	01.3925	350050	00.8973	360044	01.0967	360096	01.1312	360153	01.1570
340156	00.8569	350051	00.9152	360045	01.3436	360098	01.2983	360154	01.0896
340158	01.1004	350053	00.9169	360046	01.0815	360099	01.0796	360155	01.1258
340159	01.2219	350055	00.8785	360047	01.1190	360100	01.2945	360156	01.1181
340160	01.0693	350056	00.9141	360048	01.4128	360101	01.4661	360159	01.1979
340162	01.2329	350058	00.9909	360049	01.2299	360102	01.2384	360161	01.2579
340164	01.2479	350060	01.0631	360050	01.3023	360103	01.2475	360162	01.1490
340166	01.3652	350061	01.0211	360051	01.4051	360104	00.9289	360163	01.5472
340167	00.5984	350063	00.8345	360052	01.4782	360106	01.1539	360164	01.1149
350001	01.0055	350064	01.0090	360053	01.2470	360107	01.1396	360165	01.0489
350002	01.5147	350065	00.9994	360054	01.2375	360108	01.1084	360166	01.0204
350003	01.1496	350066	00.8789	360055	01.1762	360109	01.0925	360168	00.9157
350004	01.7249	350067	00.8789	360056	01.2209	360112	01.4640	360169	00.9948
350005	01.1795	360001	01.1852	360057	00.9979	360113	01.2463	360170	01.0825
350006	01.2567	360002	01.1060	360058	01.1326	360114	01.1235	360171	00.9892
350007	00.9532	360003	01.3869	360059	01.3770	360115	01.1413	360172	01.2615
350008	00.9654	360006	01.5666	360061	00.6032	360116	01.0822	360174	01.1176
350009	01.1272	360007	01.1126	360062	01.4850	360118	01.2313	360175	01.1452
350010	01.0143	360008	01.1912	360063	01.0959	360119	01.1000	360176	01.1960
350011	01.5632	360009	01.2413	360064	01.3709	360120	00.8397	360177	01.0443
350012	00.9783	360010	01.1385	360065	01.2629	360121	01.0919	360178	01.2704
350013	00.9910	360011	01.2855	360066	01.2208	360122	01.2384	360179	01.2102
350014	01.0654	360012	01.3328	360067	01.1736	360123	01.1494	360180	01.8666
350015	01.6276	360013	01.0723	360068	01.3698	360124	01.2201	360184	00.9955
350016	01.0792	360014	01.1877	360069	01.0278	360125	01.1006	360185	01.1893
350017	01.2951	360015	01.4288	360070	01.2613	360126	01.1901	360186	00.9895
350018	01.0037	360016	01.3482	360071	01.1698	360127	00.9960	360187	01.2634
350019	01.4638	360017	01.5212	360072	01.2221	360128	01.1073	360188	01.0877
350020	01.2457	360018	01.2856	360074	01.2702	360129	01.1469	360189	01.0458
350021	01.0059	360019	01.1766	360075	01.3706	360130	01.1356	360192	01.2176
350023	00.9017	360020	01.2415	360076	01.2312	360131	01.2381	360193	01.2238
350024	00.9967	360021	01.2313	360077	01.3285	360132	01.2138	360194	01.0778
350025	01.1097	360024	01.2437	360078	01.2391	360133	01.3390	360195	01.1673
350027	00.9688	360025	01.1611	360079	01.4517	360134	01.3734	360197	01.1120
350029	00.8847	360026	01.1027	360080	01.2360	360135	01.1071	360200	01.1692
350030	01.1409	360027	01.4451	360081	01.2679	360136	01.0967	360203	01.1663
350031	00.9967	360028	01.2025	360082	01.2611	360137	01.4070	360204	01.1934
350032	01.1044	360029	01.0813	360083	01.1503	360139	01.1095	360210	01.2133
350033	00.9660	360030	01.1538	360084	01.4219	360140	01.0454	360211	01.1066
350034	00.9360	360031	01.2182	360085	01.5969	360141	01.3179	360212	01.3431
350035	00.8538	360032	01.1695	360086	01.2276	360142	01.0435	360213	01.0427
350036	00.9697	360034	01.1532	360087	01.2760	360143	01.1469	360218	01.2987
350038	00.9668	360035	01.3951	360088	01.1027	360144	01.3101	360230	01.2841
350039	00.9420	360036	01.1846	360089	01.0964	360145	01.3424	360231	01.1507
350041	01.0264	360037	01.6482	360090	01.1800	360147	01.2420	360232	01.1037
350042	00.8918	360038	01.3690	360091	01.2942	360148	01.2752	360234	01.1957
350043	01.1690	360039	01.2185	360092	01.2662	360149	01.1227	360236	01.1507
350044	00.8919	360040	01.1158	360093	01.1407	360150	01.1981	360238	01.0653
350047	01.0313	360041	01.2399	360094	01.1908	360151	01.2423	360239	01.1736
350049	01.0002	360042	01.1787	360095	01.2803	360152	01.4001	360240	01.0255

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 17 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
360241	00.7570	370063	01.0706	370148	01.3361	380026	01.2139	390002	01.1890
370001	01.6322	370064	00.9439	370149	01.2329	380027	01.2538	390003	01.1644
370002	01.2156	370065	01.1727	370153	01.0973	380029	01.1006	390004	01.2679
370004	01.0625	370069	01.0364	370154	01.0438	380030	00.8802	390005	01.1867
370005	00.9408	370071	00.9785	370156	01.0780	380031	00.9437	390006	01.5701
370006	01.1346	370072	01.0032	370157	01.0052	380033	01.5299	390007	01.2198
370007	01.2702	370076	01.1625	370158	01.0727	380035	01.2160	390008	01.1356
370008	01.2422	370077	01.2995	370159	01.1830	380036	01.0714	390009	01.3988
370011	00.9425	370078	01.4543	370161	00.9858	380037	01.2566	390010	01.1758
370012	00.9538	370079	00.9348	370163	00.9313	380038	01.2227	390011	01.2040
370013	01.3455	370080	00.9891	370165	01.1337	380039	01.4150	390012	01.2582
370014	01.1936	370082	00.9601	370166	01.1103	380040	01.2265	390013	01.1978
370015	01.0862	370083	01.0049	370168	00.9551	380042	01.1340	390014	00.7587
370016	01.2125	370084	00.9467	370169	01.0875	380043	00.9903	390015	01.1085
370017	00.9986	370085	00.9723	370170	00.9833	380044	01.0976	390016	01.1743
370018	01.2061	370086	01.0689	370171	00.9691	380045	01.1286	390017	01.0298
370019	01.1035	370089	01.2778	370172	00.9336	380047	01.4798	390018	01.2022
370020	01.2478	370091	01.4685	370173	00.9790	380048	01.0533	390019	01.0867
370021	00.9689	370092	01.1125	370174	00.9083	380050	01.3226	390021	01.0784
370022	01.2213	370093	01.4715	370176	01.2457	380051	01.3000	390022	01.1552
370023	01.1703	370094	01.1731	370177	01.0148	380052	01.2053	390023	01.1943
370025	01.2504	370095	00.9265	370178	01.0795	380055	01.1942	390024	00.7522
370026	01.3278	370096	00.9759	370179	01.0780	380056	01.0569	390025	00.8588
370028	01.4519	370097	01.2848	370180	01.0746	380059	00.9378	390026	01.2914
370029	01.2378	370099	01.0583	370182	01.0226	380060	01.3443	390027	01.5383
370030	01.2904	370100	01.0825	370183	01.0908	380061	01.4578	390028	01.5630
370032	01.2856	370103	01.0047	370184	01.3970	380062	00.9564	390029	01.5104
370033	01.2052	370105	01.8769	370186	00.8927	380063	01.2588	390030	01.1278
370034	01.2056	370106	01.3047	380001	01.3922	380064	01.2096	390031	01.1430
370035	01.3745	370107	00.9469	380002	01.1838	380065	01.1653	390032	01.2086
370036	01.1021	370108	00.9713	380003	01.1455	380066	01.1277	390034	01.0881
370037	01.5144	370110	00.9220	380004	01.7934	380068	01.1100	390035	01.2422
370038	00.9989	370112	00.9693	380005	01.1560	380069	01.0685	390036	01.2593
370039	01.1723	370113	01.1349	380006	01.1739	380070	01.0571	390037	01.1890
370040	01.1348	370114	01.5648	380007	01.6272	380071	01.2129	390039	01.0984
370041	01.0595	370117	01.1984	380008	01.0667	380072	00.9033	390040	01.0143
370042	00.8636	370121	01.2438	380009	01.5536	380075	01.2936	390041	01.1296
370043	00.9885	370122	00.9623	380010	01.1954	380078	01.0925	390042	01.1808
370045	01.1038	370123	01.0911	380011	01.0647	380079	01.2233	390043	01.0395
370046	01.1359	370125	01.0478	380013	01.1808	380081	01.1086	390044	01.4451
370047	01.1193	370126	01.1662	380014	01.2756	380082	01.2264	390045	01.2906
370048	01.0885	370130	01.0876	380017	01.6292	380083	01.1138	390046	01.3634
370049	01.1205	370131	01.0145	380018	01.7748	380084	01.4024	390047	01.5147
370050	00.9595	370133	01.0375	380019	01.1211	380087	01.0017	390048	01.1406
370051	01.0909	370138	01.0059	380020	01.3787	380088	01.0811	390049	01.3542
370054	01.1735	370139	01.1012	380021	01.2721	380089	01.3543	390050	01.8037
370056	01.2633	370140	01.0212	380022	01.2587	380090	01.3325	390051	02.0208
370057	01.1225	370141	01.4129	380023	01.2633	380091	01.1956	390052	01.1297
370059	01.2350	370144	01.1216	380024	01.3230	380094	01.0797	390054	01.1623
370060	00.9820	370146	01.0115	380025	01.2923	390001	01.2359	390055	01.5378

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
390056	01.1460	390113	01.2071	390170	01.5840	390235	01.7107	400026	01.0665
390057	01.2716	390114	01.0293	390171	01.1270	390236	01.0954	400027	01.0948
390058	01.2932	390115	01.2204	390172	01.1301	390237	01.4347	400028	01.1200
390059	01.4400	390116	01.2538	390173	01.1224	390238	00.8204	400029	01.0239
390060	01.1971	390117	01.0747	390174	01.4761	390242	01.2174	400031	00.9677
390061	01.2895	390118	01.1834	390176	01.1244	390244	00.9134	400032	01.2105
390062	01.1384	390119	01.2333	390178	01.3375	390245	01.2333	400037	00.9085
390063	01.4667	390121	01.1646	390179	01.2775	390246	01.1094	400038	01.0295
390064	01.3648	390122	01.1810	390180	01.3058	390247	01.0844	400044	01.0911
390065	01.2791	390123	01.2154	390181	01.0717	390249	01.0387	400048	01.1343
390066	01.2558	390125	01.1795	390183	01.0579	390252	00.7692	400061	01.6002
390067	01.5140	390126	01.2428	390184	01.1452	390256	01.6728	400079	01.1326
390068	01.2539	390127	01.1146	390185	01.2496	390258	01.1811	400087	01.2002
390069	01.2119	390128	01.1156	390186	01.1152	390260	01.3290	400088	00.8792
390070	01.1619	390130	01.0586	390187	01.1307	390261	01.7354	400089	01.0894
390071	01.1068	390131	01.2259	390188	01.3922	390262	01.5112	400090	01.1332
390072	01.0243	390132	00.9846	390189	01.1059	390263	01.4560	400094	01.0355
390073	01.2393	390133	01.3130	390191	01.1057	390265	01.2247	400098	01.2028
390074	01.1898	390135	01.2921	390192	01.1156	390266	01.1111	400102	01.1844
390075	01.2657	390136	01.2422	390193	01.1809	390267	01.1764	400103	01.4686
390076	01.2265	390137	01.1115	390194	01.0894	390268	01.1861	400104	01.1573
390077	01.2817	390138	01.2497	390195	01.3439	390270	01.2632	400105	01.2418
390078	01.0449	390139	01.4546	390196	01.2015	390272	00.5738	400106	01.0652
390079	01.6787	390142	01.6168	390197	01.3296	390275	00.5985	400109	01.2992
390080	01.2043	390143	00.9058	390198	01.2124	390276	01.7406	400110	01.1844
390081	01.2075	390145	01.1973	390199	01.3070	390277	01.1769	400111	01.1497
390083	01.1415	390146	01.1474	390200	01.0730	890278	00.8840	400112	01.2456
390084	01.1356	390147	01.1725	390201	01.3252	400001	01.2039	400113	01.0900
390086	01.1402	390148	01.0942	390203	01.2597	400002	01.3265	400114	01.0395
390088	01.3374	390149	01.2094	390204	01.1839	400003	01.0817	400115	01.0893
390090	01.6959	390150	01.1317	390205	01.1683	400004	01.1591	400116	01.0556
390091	01.1431	390151	01.2057	390206	01.2824	400005	01.0788	400117	01.1964
390092	01.1974	390152	01.0527	390209	01.1022	400006	01.1818	400118	01.1224
390093	01.1608	390153	01.1801	390211	01.1517	400007	01.1191	400119	01.1299
390095	01.1901	390154	01.0918	390213	00.9919	400008	01.1083	400120	01.2713
390096	01.2327	390155	01.2760	390215	01.1977	400009	00.9785	400121	00.9644
390097	01.3446	390156	01.3817	390217	01.1375	400010	01.1190	410001	01.2575
390098	01.5781	390157	01.1558	390219	01.2102	400011	01.1129	410002	01.1751
390100	01.6537	390158	01.2679	390220	01.1748	400012	00.9530	410004	01.3573
390101	01.2298	390159	01.2841	390222	01.2463	400013	00.9035	410005	01.3188
390102	01.2598	390160	01.1364	390223	01.4501	400014	01.3587	410006	01.2125
390103	01.0648	390161	01.0408	390224	00.9104	400015	01.1062	410007	01.4322
390104	01.1948	390162	01.1831	390225	01.2881	400016	01.2884	410008	01.1107
390106	01.0885	390163	01.1559	390226	01.5109	400017	01.0570	410009	01.2208
390107	01.1535	390164	01.6315	390228	01.2272	400018	01.1251	410010	00.9119
390108	01.2956	390165	01.0988	390229	01.3554	400019	01.2009	410011	01.1882
390109	01.1943	390166	01.1409	390231	01.3018	400021	01.2530	410012	01.4155
390110	01.2429	390167	01.2644	390232	01.1027	400022	01.2801	410013	01.2033
390111	01.6694	390168	01.1392	390233	01.2693	400023	00.5020	410014	01.0365
390112	01.1816	390169	01.2574	390234	01.3164	400024	01.0387	410016	01.0045

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 19 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
420002	01.2837	420068	01.1576	430039	01.0615	440024	01.1362	440100	01.0799
420003	01.0536	420069	01.0585	430040	00.9544	440025	01.1003	440102	01.0195
420004	01.7721	420070	01.2204	430041	00.9529	440026	01.1713	440103	01.1735
420005	01.1130	420071	01.2259	430042	01.0428	440029	01.1620	440104	01.4126
420006	01.1710	420072	00.9426	430043	01.1517	440030	01.0420	440105	00.9387
420007	01.4145	420073	01.3397	430044	00.9115	440031	01.1004	440109	01.0802
420009	01.2443	420074	00.9927	430047	01.1289	440032	00.9951	440110	01.0679
420010	01.0952	420075	00.9686	430048	01.1291	440033	01.0803	440111	01.1777
420011	01.0027	420076	01.0502	430049	00.9473	440034	01.2474	440114	01.1646
420014	01.1367	420078	01.4850	430051	01.0414	440035	01.1890	440115	01.0945
420015	01.2471	420079	01.4164	430054	01.0084	440038	00.9637	440120	01.3289
420016	01.1018	420080	01.2640	430056	00.8618	440039	01.4866	440121	01.1658
420018	01.4785	420081	01.0345	430057	00.9798	440040	00.8564	440125	01.2625
420019	01.1611	420082	01.2826	430060	01.0417	440041	00.9073	440128	00.8896
420020	01.2235	420083	01.1726	430062	00.8826	440046	00.9875	440130	01.1425
420022	01.1442	420084	00.7166	430064	01.0286	440047	00.9404	440131	01.1652
420023	01.3153	420085	01.2254	430065	01.0214	440048	01.4521	440132	01.0174
420026	01.6445	420086	01.1873	430066	01.0278	440049	01.5189	440133	01.5017
420027	01.1823	420087	01.3494	430073	01.0594	440050	01.0858	440135	01.2155
420028	01.0743	420088	01.0798	430076	00.9513	440051	01.0062	440136	01.2617
420029	01.5930	420089	01.2284	430077	01.3580	440052	01.0223	440137	01.1048
420030	01.1615	430004	01.0709	430079	01.0583	440053	01.1419	440141	00.9125
420031	00.9146	430005	01.2442	430080	00.8301	440054	00.9864	440142	00.9552
420032	00.9086	430007	01.0806	430081	01.0311	440056	00.9494	440143	01.0053
420033	01.1904	430008	01.2192	430082	00.9109	440057	00.9547	440144	01.1814
420035	00.9098	430009	01.1327	430083	00.8688	440058	01.1305	440145	01.0012
420036	01.2279	430010	01.0729	430084	00.9314	440059	01.1135	440146	01.4416
420037	01.2312	430011	01.2653	430085	00.9326	440060	01.1499	440147	01.0371
420038	01.0990	430012	01.2509	430086	00.9275	440061	01.1353	440148	01.0549
420039	01.0959	430013	01.1617	430087	00.9405	440063	01.2203	440149	01.1840
420040	01.3014	430014	01.2710	430088	01.0494	440064	00.9953	440150	01.2776
420042	01.0450	430015	01.0916	440001	01.0653	440065	01.0601	440151	01.1275
420043	01.1414	430016	01.5250	440002	01.3328	440067	01.1908	440152	01.3392
420044	01.2015	430017	01.1530	440003	01.1498	440068	01.1301	440153	00.9400
420048	01.0604	430018	00.9534	440006	01.3425	440069	01.2501	440154	00.8282
420049	01.0876	430020	01.1208	440007	01.0077	440070	00.9287	440156	01.3359
420050	00.9754	430022	00.9431	440008	00.9871	440071	01.2926	440157	00.8936
420051	01.4916	430023	01.0285	440009	01.0101	440072	01.2505	440159	01.1749
420053	01.1163	430024	01.0043	440010	01.0428	440073	01.2527	440160	01.0469
420054	01.1145	430025	01.0027	440011	01.2513	440074	00.9509	440161	01.6908
420055	01.1124	430026	01.0297	440012	01.2568	440078	00.9532	440162	01.1133
420056	01.0618	430027	01.6351	440014	00.9427	440079	00.8100	440166	01.2574
420057	01.0712	430028	01.0234	440015	01.4433	440081	01.1652	440167	01.3006
420059	01.1472	430029	00.8834	440016	01.0456	440082	01.6827	440168	00.9733
420061	01.2520	430031	01.0026	440017	01.3229	440083	01.0891	440170	01.3130
420062	01.0704	430033	01.0241	440018	01.1791	440084	01.0506	440173	01.3855
420064	01.1148	430034	01.0695	440019	01.4074	440087	01.0042	440174	00.9387
420065	01.2353	430036	01.1554	440020	01.1416	440090	01.0704	440175	01.0526
420066	00.9925	430037	00.8983	440022	01.1532	440091	01.3579	440176	01.1761
420067	01.1220	430038	01.0216	440023	00.9341	440095	01.1056	440177	00.9596

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 20 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
440178	01.3818	450046	01.3899	450118	01.3762	450188	00.9866	450275	01.0356
440180	01.0385	450047	01.1091	450119	01.2440	450190	01.3237	450276	01.1625
440181	01.0186	450048	01.0434	450121	01.2815	450191	01.1556	450278	00.9464
440182	00.9175	450050	01.2419	450123	01.1633	450192	01.0685	450280	01.2578
440183	01.3096	450051	01.5581	450124	01.4717	450193	02.1284	450281	01.2643
440184	01.0987	450052	01.0824	450126	01.1807	450194	01.1412	450283	01.1354
440185	01.0883	450053	01.1791	450127	01.0486	450195	01.3221	450286	01.0657
440186	01.0646	450054	01.4875	450128	01.2792	450196	01.2409	450288	01.1404
440187	00.9659	450055	01.1210	450130	01.4740	450197	01.3188	450289	01.1924
440189	01.4203	450056	01.4658	450131	01.2624	450200	01.2587	450292	01.1776
440192	01.0229	450057	01.1527	450132	01.3916	450201	01.1417	450293	00.9671
440193	01.1319	450058	01.4206	450133	01.3266	450203	01.2111	450296	01.1295
440194	01.1880	450059	01.2404	450135	01.5026	450207	01.3308	450297	01.0356
440196	01.0388	450060	01.2590	450137	01.2855	450208	01.1470	450299	01.3495
440197	01.2519	450063	01.0402	450140	00.9346	450209	01.2746	450303	00.9637
440200	01.0932	450064	01.4396	450141	01.1020	450210	01.1111	450305	00.9775
440203	01.0209	450065	01.1076	450142	01.3793	450211	01.2783	450306	01.0525
440205	00.9763	450068	01.4694	450143	01.0060	450213	01.3324	450307	01.0816
450002	01.3140	450070	01.1051	450144	01.1848	450214	01.2382	450309	01.0733
450004	01.0767	450072	01.1693	450145	01.0634	450217	00.9142	450315	01.2959
450005	01.0052	450073	01.1789	450146	00.9939	450218	01.0057	450317	00.9971
450007	01.3322	450074	01.1684	450147	01.3246	450219	01.1910	450320	01.2722
450008	01.2472	450076	01.2121	450148	01.2849	450221	01.1533	450321	00.8861
450010	01.1712	450077	00.9890	450149	01.3328	450222	01.3524	450322	00.8460
450011	01.5027	450078	01.0412	450150	00.9415	450224	01.1102	450324	01.4607
450014	01.0683	450079	01.4185	450151	01.0713	450229	01.3553	450325	01.2150
450015	01.3845	450080	01.2947	450152	01.2773	450230	01.2915	450327	01.0918
450016	01.5413	450081	01.1808	450153	01.4032	450231	01.5362	450330	01.1953
450018	01.5071	450082	01.0262	450154	01.2365	450233	01.0120	450331	01.2332
450019	01.3143	450083	01.4075	450155	00.9835	450234	00.8796	450332	01.3368
450020	01.1001	450085	01.1055	450157	01.0776	450235	01.1309	450334	01.0733
450021	01.6002	450087	01.3443	450160	01.0407	450236	01.0949	450337	01.2140
450023	01.4350	450090	01.1136	450162	01.3408	450237	01.4619	450340	01.3169
450024	01.1597	450092	01.2408	450163	01.2053	450239	01.1596	450341	01.0289
450025	01.3689	450094	01.3348	450164	01.1906	450241	00.8881	450342	01.4218
450027	01.1537	450096	01.4144	450165	00.9699	450243	01.0732	450346	01.3105
450028	01.3601	450097	01.2991	450166	00.9960	450246	01.0044	450347	01.2533
450029	01.1562	450098	01.1501	450169	00.8704	450248	00.9982	450348	00.9192
450031	01.1732	450099	01.1422	450170	01.1086	450249	00.9346	450349	01.3352
450032	01.1327	450101	01.3364	450175	01.2565	450250	01.0047	450351	01.3325
450033	01.5280	450102	01.5391	450176	01.1502	450253	01.0909	450352	01.2408
450034	01.4906	450104	01.2778	450177	01.1219	450256	01.1467	450353	01.1840
450035	01.4248	450107	01.2708	450178	01.1587	450258	01.0520	450355	01.0260
450037	01.4409	450108	00.9862	450179	01.0472	450259	01.2617	450357	01.1355
450039	01.1266	450109	00.9997	450181	00.9989	450264	00.9137	450358	01.7846
450040	01.5860	450110	01.3102	450182	00.9449	450268	01.1277	450362	01.0086
450041	01.0699	450111	01 3247	450183	01.1984	450269	00 9240	450365	00.9160
450042	01 5664	450112	01 2191	450184	01 3852	450270	01 1787	450366	01.3822
450043	01 4151	450113	01 1282	450185	01 0482	450271	01 2464	450369	01.2138
450044	01 4960	450115	01 0644	450187	01.2898	450272	01 2311	450370	01.2359

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 21 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
450371	01.1166	450497	01.1736	450617	01.3744	450688	01.1991	450757	01.0007
450372	01.2960	450498	01.0106	450620	01.1238	450690	01.3095	450758	01.6198
450373	01.1102	450508	01.4901	450623	01.0981	450691	01.3279	450759	01.0674
450374	00.9031	450514	01.1012	450626	01.0707	450694	01.2601	450760	01.0590
450376	01.4184	450517	00.9714	450628	00.9684	450696	01.2084	450761	00.8748
450378	01.3476	450518	01.2243	450630	01.5301	450697	01.3850	460001	01.5337
450379	01.4783	450523	01.4421	450631	01.5901	450698	00.8583	460003	01.4297
450381	00.9481	450530	01.3177	450632	01.0692	450700	01.0392	460004	01.5710
450388	01.5851	450534	01.0491	450633	01.5120	450702	01.2375	460005	01.3126
450389	01.1687	450535	01.2672	450634	01.3261	450703	01.1653	460006	01.2908
450391	01.2346	450537	01.2826	450637	01.2303	450704	01.1614	460007	01.2560
450393	01.3082	450538	01.3168	450638	01.4971	450705	00.9341	460008	01.2934
450394	01.1817	450539	01.2902	450639	01.5176	450706	01.2945	460009	01.5872
450395	01.0374	450544	01.2627	450641	00.8710	450709	01.2685	460010	01.9022
450399	01.1411	450545	01.4986	450643	01.1657	450711	01.5575	460011	01.2083
450400	01.2397	450546	01.3208	450644	02.1395	450712	00.6825	460013	01.3525
450403	01.3187	450547	00.9929	450646	01.3204	450713	01.3055	460014	01.0328
450410	01.1028	450550	01.2293	450647	01.8584	450715	01.3805	460015	01.2421
450411	01.0340	450551	00.9913	450648	01.1161	450716	01.1293	460016	00.9365
450417	00.9186	450557	01.0123	450649	01.0348	450717	01.2616	460017	01.2489
450418	01.3406	450558	01.7976	450651	01.5399	450718	01.0913	460018	00.8608
450419	01.3093	450559	00.9493	450652	00.9690	450719	01.1476	460019	01.0803
450422	00.7277	450561	01.3799	450653	01.2366	450722	01.1299	460020	01.0515
450423	01.3017	450563	01.1239	450654	00.9979	450723	01.3175	460021	01.3259
450424	01.2322	450565	01.1967	450656	01.3115	450724	01.2915	460022	00.9994
450425	01.0763	450570	00.9825	450658	01.0183	450725	01.1033	460023	01.1835
450429	01.0270	450571	01.3766	450659	01.3382	450726	00.9944	460024	00.9837
450431	01.4688	450573	01.1053	450660	01.4493	450727	01.0717	460025	00.8983
450438	01.1774	450574	00.9965	450661	01.1319	450728	00.9439	460026	00.9565
450446	01.0563	450575	01.0716	450662	01.2459	450729	00.8039	460027	00.8597
450447	01.2950	450578	01.0086	450665	01.0615	450730	01.2545	460029	00.9898
450450	01.0724	450580	01.1758	450666	01.2497	450732	01.1127	460030	01.0778
450451	01.1209	450583	01.0692	450667	01.1358	450733	01.3025	460032	00.9993
450457	01.5022	450584	01.2771	450668	01.4746	450734	01.1277	460033	00.9044
450458	00.9922	450586	01.1931	450669	01.2437	450735	00.8600	460035	00.9257
450460	01.0411	450587	01.1779	450670	01.1711	450737	00.7086	460036	01.0267
450462	01.3566	450588	00.9258	450672	01.4944	450742	01.2897	460037	01.0165
450464	00.8870	450590	00.9831	450673	00.9741	450743	01.2290	460039	00.9191
450465	01.1848	450591	01.1285	450674	00.9446	450744	01.1537	460041	01.1458
450467	01.0819	450596	01.1526	450675	01.2486	450745	01.0107	460042	01.4241
450469	01.2166	450597	01.1358	450677	01.3156	450746	00.9476	460043	01.1921
450472	01.1122	450600	00.9748	450678	01.4340	450747	01.1478	460044	01.2280
450473	01.0947	450603	00.9220	450679	00.9423	450748	00.8614	460046	00.9128
450475	01.0921	450604	01.2656	450681	01.5348	450749	01.0831	460047	01.4901
450476	01.0232	450605	01.2910	450682	01.2002	450750	00.9526	460048	01.1205
450484	01.3512	450607	00.8989	450683	01.3482	450751	01.1959	470001	01.1500
450486	00.9930	450609	00.9298	450684	01.3154	450752	01.2877	470003	01.7194
450488	01.0926	450610	01.3003	450685	01.2834	450753	01.0785	470004	01.1185
450489	01.0758	450614	01.0563	450686	01.3312	450754	01.0393	470005	01.2705
450492	00.9148	450615	01.0354	450687	01.1144	450755	00.9945	470006	01.2738

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 22 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
470008	01.1667	490046	01.2744	490118	01.5533	500051	01.6926	500125	01.0582
470010	01.0828	490047	01.1686	490119	01.3242	500052	01.2016	500129	01.6756
470011	01.1883	490048	01.2226	490120	01.2886	500053	01.1568	500132	00.8648
470012	01.2589	490050	01.2205	490122	01.1799	500054	01.8165	500134	00.9332
470013	01.1215	490052	01.3680	490123	01.1081	500055	01.0671	500135	01.2174
470015	01.1875	490053	01.2853	490124	01.3145	500057	01.2147	500137	00.9425
470016	01.0480	490054	01.1308	490126	01.1731	500058	01.2493	500138	02.1494
470018	01.0804	490057	01.1696	490127	01.0683	500059	01.2128	500139	01.2730
470020	00.9595	490059	01.3430	490129	01.1261	500060	01.1402	500140	01.0415
470023	01.2416	490060	01.0900	490130	01.2051	500061	01.0350	500141	01.3226
470024	01.1899	490063	01.5190	490131	00.9405	500062	00.9788	500142	02.6247
490001	01.0488	490066	01.1152	500001	01.3477	500064	01.4511	510001	01.4274
490002	01.0593	490067	01.1797	500002	01.3890	500065	01.2533	510002	01.2706
490003	00.6725	490069	01.2696	500003	01.3458	500068	01.0253	510004	00.9688
490004	01.1675	490071	01.1836	500005	01.6104	500069	01.0812	510005	01.0215
490005	01.3594	490073	01.2150	500007	01.3372	500071	01.3176	510006	01.2428
490006	01.1782	490074	01.2648	500008	01.7920	500072	01.2079	510007	01.3393
490007	01.6396	490075	01.2078	500009	01.3644	500073	01.1345	510008	01.1328
490008	01.0728	490077	01.1622	500011	01.2077	500074	01.1709	510009	01.1380
490009	01.5451	490079	01.2133	500012	01.4790	500075	01.3275	510011	01.1057
490010	01.2165	490083	00.7554	500014	01.6208	500076	01.3278	510012	01.0806
490011	01.1963	490084	01.1105	500015	01.3419	500077	01.2614	510013	01.2110
490012	01.0664	490085	01.0520	500016	01.3112	500078	01.3141	510014	00.8758
490013	01.1039	490088	01.0531	500017	01.2216	500079	01.2566	510015	01.0051
490014	01.4590	490089	01.0193	500019	01.2331	500080	00.8870	510016	01.0676
490015	01.3424	490090	01.1658	500021	01.3730	500084	00.9977	510018	01.1624
490017	01.2741	490091	01.2873	500023	01.1166	500085	01.0596	510020	01.1061
490018	01.1018	490092	01.1058	500024	01.3447	500086	01.2935	510022	01.5075
490019	01.0977	490093	01.2753	500025	01.7932	500087	01.2878	510023	01.0320
490020	01.0618	490094	01.0923	500026	01.2744	500088	01.3444	510024	01.3081
490021	01.1080	490095	01.2596	500027	01.5276	500089	01.0200	510025	01.0622
490022	01.2240	490097	01.1077	500028	01.0031	500092	01.0439	510026	00.9880
490023	01.2347	490098	01.2711	500029	00.9223	500093	01.2260	510027	01.1119
490024	01.5028	490099	01.0160	500030	01.3633	500094	01.0473	510028	01.1477
490027	01.1400	490100	01.2530	500031	01.2016	500096	00.9312	510029	01.2562
490028	01.2226	490101	01.1464	500033	01.2594	500097	01.0933	510030	01.1162
490029	01.1281	490104	00.8054	500034	01.0406	500098	01.0626	510031	01.2709
490030	01.2174	490105	00.8025	500035	01.3775	500101	01.0500	510033	01.2062
490031	01.0774	490106	00.8875	500036	01.2790	500102	00.9466	510035	01.0361
490032	01.6456	490107	01.1882	500037	01.1333	500104	01.2013	510036	01.1421
490033	01.1876	490108	00.9359	500039	01.2465	500106	00.9464	510038	01.0774
490035	01.0944	490109	00.8629	500041	01.2351	500107	01.1897	510039	01.2570
490037	01.1330	490110	01.0868	500042	01.3239	500108	01.5785	510040	01.1172
490038	01.2407	490111	01.1158	500043	01.1972	500110	01.2996	510043	01.1190
490040	01.2527	490112	01.4453	500044	01.9190	500114	01.3587	510046	01.3041
490041	01.1150	490113	01.1968	500045	01.2196	500118	01.1917	510047	01.1866
490042	01.2462	490114	01.0966	500046	01.3099	500119	01.3435	510048	01.1388
490043	01.1870	490115	01.1758	500048	00.9836	500122	01.2504	510050	01.2014
490044	01.2839	490116	01.0579	500049	01.2701	500123	00.9638	510053	01.0345
490045	01.1167	490117	01.0300	500050	01.1298	500124	01.3209	510055	01.2259

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

TABLE 3C : HOSPITAL CASE MIX INDEXES FOR DISCHARGES OCCURRING IN FEDERAL FISCAL YEAR 1989 PAGE 23 OF 23

PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX	PROVIDER	CASE MIX
510058	01.2224	520034	01.2572	520101	01.1233	520176	00.9229		
510059	00.8981	520035	01.1950	520102	01.2178	520177	01.3921		
510060	01.1895	520037	01.5674	520103	01.3303	520178	01.1569		
510061	01.0758	520038	01.2482	520104	01.0090	520180	00.8837		
510062	01.1232	520039	00.9839	520105	01.0231	520182	00.5412		
510063	01.1317	520040	01.3567	520107	01.2332	520184	00.5738		
510065	01.0596	520041	01.0772	520109	01.0918	530001	01.2538		
510066	01.1563	520042	01.0087	520110	01.0565	530002	01.1902		
510067	01.1909	520044	01.3112	520111	01.1413	530003	00.9721		
510068	01.0780	520045	01.5513	520112	01.0651	530004	01.0152		
510070	01.1399	520047	01.0109	520113	01.1533	530005	00.9907		
510071	01.2805	520048	01.3333	520114	01.1098	530006	01.0932		
510072	01.0964	520049	01.7179	520115	01.2126	530007	01.1166		
510076	00.9080	520051	01.7728	520116	01.1553	530008	01.0751		
510077	01.0312	520053	01.0943	520117	01.0667	530009	00.9925		
510080	00.9919	520054	01.1494	520118	00.9460	530010	01.1681		
510081	01.0569	520056	01.2261	520120	01.0464	530011	01.1543		
510082	00.9556	520057	01.1245	520121	01.0300	530012	01.5330		
510084	01.0207	520058	01.0640	520122	01.0777	530014	01.1272		
510085	01.2308	520059	01.2649	520123	01.0030	530015	01.1086		
510086	01.0787	520060	01.2380	520124	01.1026	530016	01.1899		
520002	01.3249	520062	01.2001	520130	01.0036	530017	00.9839		
520003	01.2004	520063	01.2530	520131	01.1041	530018	01.0980		
520004	01.2774	520064	01.4369	520132	01.1739	530019	00.9714		
520006	01.0827	520066	01.2390	520134	01.1295	530022	01.1218		
520007	01.0727	520068	00.9687	520135	00.9329	530023	00.9197		
520008	01.2062	520069	01.2593	520136	01.3819	530024	00.9674		
520009	01.3480	520070	01.2874	520138	01.6548	530025	01.2259		
520010	01.1145	520071	01.1097	520139	01.2788	530026	01.0452		
520011	01.1330	520074	01.1520	520140	01.3621	530027	00.8467		
520012	00.9827	520075	01.3284	520141	01.0219	530029	00.9598		
520013	01.2453	520076	01.1974	520142	00.9332	530031	01.0178		
520014	01.1623	520077	01.0323	520144	01.0782				
520015	01.2761	520078	01.3166	520145	01.0213				
520016	01.0242	520081	01.2087	520146	01.0953				
520017	01.1718	520082	01.2140	520148	01.1746				
520018	01.0246	520083	01.4860	520149	01.0747				
520019	01.2473	520084	01.0407	520151	01.0295				
520020	01.3342	520087	01.4595	520152	01.0920				
520021	01.1837	520088	01.1822	520153	01.0472				
520024	01.0075	520089	01.3358	520154	01.1699				
520025	01.0987	520090	01.1780	520156	01.1458				
520026	00.9840	520091	01.3504	520157	01.0673				
520027	01.1472	520092	01.1280	520159	00.9573				
520028	01.3024	520094	01.2194	520160	01.7050				
520029	00.9903	520095	01.2602	520161	01.1739				
520030	01.4916	520096	01.2571	520170	01.2239				
520031	01.1282	520097	01.2611	520171	00.9915				
520032	01.1690	520098	01.5756	520173	01.0669				
520033	01.2277	520100	01.2057	520174	01.4069				

NOTE: CASE MIX INDEXES DO NOT INCLUDE DISCHARGES FROM PPS-EXEMPT UNITS.
: CASE MIX INDEXES INCLUDE CASES RECEIVED IN HCFA CENTRAL OFFICE THROUGH JUNE 1990.

BILLING CODE 4120-01-C

TABLE 4a.—WAGE INDEX FOR URBAN AREAS

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Abilene, TX	0-9252
Taylor, TX	
Aguadilla, PR	0-4583
Aguada, PR	
Aguadilla, PR	
Isabella, PR	
Moca, PR	
Akron, OH	0.9473
Portage, OH	
Summit, OH	
Albany, GA	0.8078
Dougherty, GA	
Lee, GA	
Albany-Schenectady-Troy, NY	0.8953
Albany, NY	
Greene, NY	
Montgomery, NY	
Rensselaer, NY	
Saratoga, NY	
Schenectady, NY	
Albuquerque, NM	1.0158
Bernalillo, NM	
Alexandria, LA	0.8304
Rapides, LA	
Allentown-Bethlehem-Easton, PA-NJ	0.9880
Warren, NJ	
Carbon, PA	
Lehigh, PA	
Northampton, PA	
Altoona, PA	0.9270
Blair, PA	
Amarillo, TX	0.8795
Potter, TX	
Randall, TX	
*Anaheim-Santa Ana, CA	1.2027
Orange, CA	
Anchorage, AK	1.4225
Anchorage, AK	
Anderson, IN	0.9614
Madison, IN	
Anderson, SC	0.7283
Anderson, SC	
Ann Arbor, MI	1.1423
Washtenaw, MI	
Anniston, AL	0.7958
Calhoun, AL	
Appleton-Oshkosh-Neenah, WI	0.9210
Calumet, WI	
Outagamie, WI	
Winnebago, WI	
Arecibo, PR	0.3994
Arecibo, PR	
Camuy, PR	
Hatillo, PR	
Quebradillas, PR	
Asheville, NC	0.8769
Buncombe, NC	
Athens, GA	0.8237
Clarke, GA	
Jackson, GA	
Madison, GA	
Oconee, GA	
*Atlanta, GA	0.9629
Barrow, GA	
Butts, GA	
Cherokee, GA	
Clayton, GA	
Cobb, GA	
Coweta, GA	

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
De Kalb, GA	
Douglas, GA	
Fayette, GA	
Forsyth, GA	
Fulton, GA	
Gwinnett, GA	
Henry, GA	
Newton, GA	
Paulding, GA	
Rockdale, GA	
Spalding, GA	
Walton, GA	
Atlantic City, NJ	1.0543
Atlantic, NJ	
Cape May, NJ	
Augusta, GA-SC	0.9433
Columbia, GA	
McDuffie, GA	
Richmond, GA	
Aiken, SC	
Aurora-Elgin, IL	0.9698
Kane, IL	
Kendall, IL	
Austin, TX	0.9600
Hayes, TX	
Travis, TX	
Williamson, TX	
Bakersfield, CA	1.0905
Kern, CA	
*Baltimore, MD	1.0191
Anne Arundel, MD	
Baltimore, MD	
Baltimore City, MD	
Carroll, MD	
Harford, MD	
Howard, MD	
Queen Annes, MD	
Bangor, ME	0.9095
Penobscot, ME	
Baton Rouge, LA	0.9120
Ascension, LA	
East Baton Rouge, LA	
Livingston, LA	
West Baton, LA	
Battle Creek, MI	0.9497
Calhoun, MI	
Beaumont-Port Arthur, TX	0.9637
Hardin, TX	
Jefferson, TX	
Orange, TX	
Beaver County, PA	1.0200
Beaver, PA	
Bellingham, WA	1.0533
Whatcom, WA	
Benton Harbor, MI	0.8169
Berrien, MI	
*Bergen-Passaic, NJ	1.0331
Bergen, NJ	
Passaic, NJ	
Billings, MT	0.9357
Yellowstone, MT	
Biloxi-Gulfport, MS	0.8090
Hancock, MS	
Harrison, MS	
Binghamton, NY	0.9292
Broome, NY	
Tioga, NY	
Birmingham, AL	0.8800
Blount, AL	
Jefferson, AL	
Saint Clair, AL	

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Shelby, AL	
Walker, AL	
Bismarck, ND	0.8843
Burleigh, ND	
Morton, ND	
Bloomington, IN	0.8668
Monroe, IN	
Bloomington-Normal, IL	0.8786
McLean, IL	
Boise City, ID	0.9791
Ada, ID	
*Boston-Lawrence-Salem-Lowell-Brockton, MA	1.1749
Essex, MA	
Middlesex, MA	
Norfolk, MA	
Plymouth, MA	
Suffolk, MA	
Boulder-Longmont, CO	1.0184
Boulder, CO	
Bradenton, FL	0.9294
Manatee, FL	
Brazoria, TX	0.9188
Brazoria, TX	
Bremerton, WA	0.9568
Kitsap, WA	
Bridgeport-Stamford-Norwalk-Danbury, CT	1.2074
Fairfield, CT	
Brownsville-Harlingen, TX	0.8631
Cameron, TX	
Bryan-College Station, TX	0.9521
Brazos, TX	
Buffalo, NY	0.8939
Erie, NY	
Burlington, NC	0.8013
Alamance, NC	
Burlington, VT	0.9390
Chittenden, VT	
Grand Isle, VT	
Caguas, PR	0.4393
Caguas, PR	
Gurabo, PR	
San Lorenz, PR	
Aguas Buenas, PR	
Cayey, PR	
Cidra, PR	
Canton, OH	0.8733
Carroll, OH	
Stark, OH	
Casper, WY	0.8921
Natrona, WY	
Cedar Rapids, LA	0.8938
Linn, IA	
Champaign-Urbana-Rantoul, IL	0.8775
Champaign, IL	
Charleston, SC	0.8360
Berkeley, SC	
Charleston, SC	
Dorchester, SC	
Charleston, WV	0.9726
Kanawha, WV	
Putnam, WV	
*Charlotte-Gastonia-Rock Hill, NC-SC	0.9281
Cabarrus, NC	
Gaston, NC	
Lincoln, NC	
Mecklenburg, NC	
Rowan, NC	
Union, NC	
York, SC	
Charlottesville, VA	0.9600

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Albermarle, VA	
Charlottesville City, VA	
Fluvanna, VA	
Greene, VA	
Chattanooga, TN-GA	0.9230
Catoosa, GA	
Dade, GA	
Walker, GA	
Hamilton, TN	
Marion, TN	
Sequatchie, TN	
Cheyenne, WY	0.8009
Laramie, WY	
*Chicago, IL	1.0554
Cook, IL	
Du Page, IL	
McHenry, IL	
Chico, CA	1.0572
Butte, CA	
*Cincinnati, OH-KY-IN	0.9855
Dearborn, IN	
Boone, KY	
Campbell, KY	
Kenton, KY	
Clermont, OH	
Hamilton, OH	
Warren, OH	
Clarksville-Hopkinsville, TN-KY	0.7344
Christian, KY	
Montgomery, TN	
*Cleveland, OH	1.0776
Cuyahoga, OH	
Geauga, OH	
Lake, OH	
Medina, OH	
Colorado Springs, CO	0.9850
El Paso, CO	
Columbia, MO	0.9515
Boone, MO	
Columbia, SC	0.8971
Lexington, SC	
Richland, SC	
Columbus, GA-AL	0.7508
Russell, AL	
Chattanoochee, GA	
Muscogee, GA	
*Columbus, OH	0.9706
Delaware, OH	
Fairfield, OH	
Franklin, OH	
Licking, OH	
Madison, OH	
Pickaway, OH	
Union, OH	
Corpus Christi, TX	0.8624
Nueces, TX	
San Patricio, TX	
Cumberland, MD-WV	0.8304
Allegany, MD	
Mineral, WV	
*Dallas, TX	0.9395
Collin, TX	
Dallas, TX	
Denton, TX	
Ellis, TX	
Kaufman, TX	
Rockwall, TX	
Danville, VA	0.7532
Danville City, VA	
Pittsylvania, VA	
Davenport-Rock Island-Moline, IA-IL	0.8595
Scott, IA	
Henry, IL	
Rock Island, IL	
Dayton-Springfield, OH	0.9698
Clark, OH	
Greene, OH	
Miami, OH	
Montgomery, OH	
Dayton Beach, FL	0.8974
Volusia, FL	
Decatur, AL	0.7512
Lawrence, AL	
Morgen, AL	
Decatur, IL	0.8314
Macon, IL	
*Denver, CO	1.0805
Adams, CO	
Arapahoe, CO	
Denver, CO	
Douglas, CO	
Jefferson, CO	
Des Moines, IA	0.9202
Dallas, IA	
Polk, IA	
Warren, IA	
*Detroit, MI	1.0857
Lapeer, MI	
Livingston, MI	
Macomb, MI	
Monroe, MI	
Oakland, MI	
Saint Clair, MI	
Wayne, MI	
Dothan, AL	0.7581
Dale, AL	
Houston, AL	
Dubuque, IA	0.8551
Dubuque, IA	
Duluth, MN-WI	0.9550
St. Louis, MN	
Douglas, WI	
Eau Claire, WI	0.8507
Chippewa, WI	
Eau Claire, WI	
El Paso, TX	0.8744
El Paso, TX	
Elkhart-Goshen, IN	0.8979
Elkhart, IN	
Elmira, NY	0.8841
Chemung, NY	
Enid, OK	0.8943
Garfield, OK	
Erie, PA	0.9187
Erie, PA	
Eugene-Springfield, OR	0.9978
Lane, OR	
Evansville, IN-KY	0.9393
Posey, IN	
Vanderburgh, IN	
Warrick, IN	
Henderson, KY	
Fargo-Moorhead, ND-MN	0.9740
Clay, MN	
Cass, ND	
Fayetteville, NC	0.8324
Cumberland, NC	
Fayetteville-Springdale, AR	0.7995
Washington, AR	
Flint, MI	1.1583
Genesee, MI	
Florence, AL	0.7681
Colbert, AL	
Lauderdale, AL	
Florence, SC	0.8389
Florence, SC	
Fort Collins-Loveland, CO	1.0273
Larimor, CO	
*Fort Lauderdale-Hollywood-Pompano Beach, FL	1.0392
Broward, FL	
Fort Myers-Cape Coral, FL	0.9778
Lee, FL	
Fort Pierce, FL	1.1079
Martin, FL	
St. Lucie, FL	
Fort Smith, AR-OK	0.8003
Crawford, AR	
Sebastian, AR	
Sequoyah, OK	
Fort Walton Beach, FL	0.8892
Okaloosa, FL	
Fort Wayne, IN	0.8932
Allen, IN	
De Kalb, IN	
Whitley, IN	
*Fort Worth-Arlington, TX	0.9448
Johnson, TX	
Parker, TX	
Tarrant, TX	
Fresno, CA	1.0514
Fresno, CA	
Gadsden, AL	0.8227
Etowah, AL	
Gainesville, FL	0.9592
Alachua, FL	
Bradford, FL	
Galveston-Texas City, TX	0.9704
Galveston, TX	
Gary-Hammond, IN	0.9887
Lake, IN	
Porter, IN	
Glens Falls, NY	0.9262
Warren, NY	
Washington, NY	
Grand Forks, ND	0.9610
Grand Forks, ND	
Grand Rapids, MI	0.9917
Kent, MI	
Ottawa, MI	
Great Falls, MT	1.0026
Cascade, MT	
Greeley, CO	0.9394
Weld, CO	
Green Bay, WI	0.9618
Brown, WI	
Greensboro-Winston-Salem-High Point, NC	0.8762
Davidson, NC	
Davie, NC	
Forsyth, NC	
Guilford, NC	
Randolph, NC	
Stokes, NC	
Yadkin, NC	
Greenville-Spartanburg, SC	0.8848
Greenville, SC	
Pickens, SC	
Spartanburg, SC	
Hagerstown, MD	0.9189
Washington, MD	
Hamilton-Middletown, OH	0.9417
Butler, OH	
Harrisburg-Lebanon-Carlisle, PA	0.9953
Cumberland, PA	
Dauphin, PA	
Lebanon, PA	
*Hartford-Middletown-New Britain-Bristol, CT	1.1916
Hartford, CT	
Litchfield, CT	
Middlesex, CT	
Tolland, CT	
Hickory, NC	0.8771

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Alexander, NC	
Burke, NC	
Catawba, NC	
Honolulu, HI	1.1620
Honolulu, HI	
Houma-Thibodaux, LA	0.7202
Lafourche, LA	
Terrebonne, LA	
*Houston, TX	0.9812
Fort Bend, TX	
Harris, TX	
Liberty, TX	
Montgomery, TX	
Waller, TX	
Huntington-Ashland, WV-KY-OH	0.9470
Boyd, KY	
Carter, KY	
Greenup, KY	
Lawrence, OH	
Cabell, WV	
Wayne, WV	
Huntsville, AL	0.8865
Madison, AL	
*Indianapolis, IN	0.9600
Boone, IN	
Hamilton, IN	
Hancock, IN	
Hendricks, IN	
Johnson, IN	
Marion, IN	
Morgan, IN	
Shelby, IN	
Iowa City, IA	0.9818
Johnson, IA	
Jackson, MI	0.9697
Jackson, MI	
Jackson, MS	0.7759
Hinds, MS	
Madison, MS	
Rankin, MS	
Jackson, TN	0.7937
Madison, TN	
Jacksonville, FL	0.9082
Clay, FL	
Duval, FL	
Nassau, FL	
St. Johns, FL	
Jacksonville, NC	0.7179
Onslow, NC	
Jamestown-Dunkirk, NY	0.7761
Chatauqua, NY	
Janesville, Beloit, WI	0.8495
Rock, WI	
Jersey City, NJ	1.0562
Hudson, NJ	
Johnson City-Kingsport-Bristol, TN-VA	0.8698
Carter, TN	
Hawkins, TN	
Sullivan, TN	
Unicoi, TN	
Washington, TN	
Bristol City, VA	
Scott, VA	
Washington, VA	
Johnstown, PA	0.9086
Cambria, PA	
Somerset, PA	
Joliet, IL	1.0314
Grundy, IL	
Will, IL	
Joplin, MO	0.7926
Jasper, MO	
Newton, MO	
Kalamazoo, MI	1.1750

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Kalamazoo, MI	
Kankakee, IL	0.8518
Kankakee, IL	
*Kansas City, KS-MO	0.9620
Johnson, KS	
Leavenworth, KS	
Miami, KS	
Wyandotte, KS	
Cass, MO	
Clay, MO	
Jackson, MO	
Lafayette, MO	
Platte, MO	
Ray, MO	
Kenosha, WI	0.9285
Kenosha, WI	
Killeen-Temple, TX	1.1334
Bell, TX	
Coryell, TX	
Knoxville, TN	0.8693
Anderson, TN	
Blount, TN	
Grainger, TN	
Jefferson, TN	
Knox, TN	
Sevier, TN	
Union, TN	
Kokomo, IN	0.9990
Howard, IN	
Tipton, IN	
LaCrosse, WI	0.8987
LaCrosse, WI	
Lafayette, LA	0.8269
Lafayette, LA	
St. Martin, LA	
Lafayette, IN	0.8461
Tippecanoe, IN	
Lake Charles, LA	0.8403
Calcasieu, LA	
Lake County, IL	1.0028
Lake, IL	
Lakeland-Winter Haven, FL	0.8199
Polk, FL	
Lancaster, PA	0.9290
Lancaster, PA	
Lansing-East Lansing, MI	1.0258
Clinton, MI	
Eaton, MI	
Ingham, MI	
Laredo, TX	0.7303
Webb, TX	
Las Cruces, NM	0.7936
Dona Ana, NM	
Las Vegas, NV	1.0667
Clark, NV	
Lawrence, KS	0.9042
Douglas, KS	
Lawton, OK	0.8417
Comanche, OK	
Lewiston-Auburn, ME	0.9021
Androscoggin, ME	
Lexington-Fayette, KY	0.8475
Bourbon, KY	
Clark, KY	
Fayette, KY	
Jessamine, KY	
Scott, KY	
Woodford, KY	
Lima, OH	0.8282
Allen, OH	
Auglaize, OH	
Lincoln, NE	0.8986
Lancaster, NE	
Little Rock-North Little Rock, AR	0.8475

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Faulkner, AR	
Lonoke, AR	
Pulaski, AR	
Saline, AR	
Longview-Marshall, TX	0.8163
Gregg, TX	
Harrison, TX	
Lorain-Elyria, OH	0.8981
Lorain, OH	
*Los Angeles-Long Beach, CA	1.2397
Los Angeles, CA	
Louisville, KY-IN	0.9123
Clark, IN	
Floyd, IN	
Harrison, IN	
Bullitt, KY	
Jefferson, KY	
Oldham, KY	
Shelby, KY	
Lubbock, TX	0.8825
Lubbock, TX	
Lynchburg, VA	0.8573
Amherst, VA	
Campbell, VA	
Lynchburg City, VA	
Macon-Warner Robins, GA	0.8631
Bibb, GA	
Houston, GA	
Jones, GA	
Peach, GA	
Madison, WI	1.0347
Dane, WI	
Manchester-Nashua, NH	1.0216
Hillsborough, NH	
Merrimack, NH	
Mansfield, OH	0.8421
Richland, OH	
Mayaguez, PR	0.4788
Añasco, PR	
Cabo Rojo, PR	
Hormigueros, PR	
Mayaguez, PR	
San Germán, PR	
McAllen-Edinburg-Mission, TX	0.7163
Hidalgo, TX	
Medford, OR	1.0019
Jackson, OR	
Melbourne-Titusville, FL	0.9231
Brevard, FL	
Memphis, TN-AR-MS	0.9091
Crittenden, AR	
De Soto, MS	
Shelby, TN	
Tipton, TN	
Merced, CA	1.0415
Merced, CA	
*Miami-Hialeah, FL	1.0223
Dade, FL	
Middlesex-Somerset-Hunterdon, NJ	1.0437
Hunterdon, NJ	
Middlesex, NJ	
Somerset, NJ	
Midland, TX	1.0412
Midland, TX	
*Milwaukee, WI	0.9752
Milwaukee, WI	
Ozaukee, WI	
Washington, WI	
Waukesha, WI	
*Minneapolis-St. Paul, MN-WI	1.0855

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Anoka, MN	
Carver, MN	
Chisago, MN	
Dakota, MN	
Hennepin, MN	
Isanti, MN	
Ramsey, MN	
Scott, MN	
Washington, MN	
Wright, MN	
St. Croix, WI	
Mobile, AL	0.8348
Baldwin, AL	
Mobile, AL	
Modesto, CA	1.1569
Stanislaus, CA	
Monmouth-Ocean, NJ	0.9934
Monmouth, NJ	
Ocean, NJ	
Monroe, LA	0.7891
Ouachita, LA	
Montgomery, AL	0.7765
Autauga, AL	
Elmore, AL	
Montgomery, AL	
Muncie, IN	0.8488
Delaware, IN	
Muskegon, MI	0.9600
Muskegon, MI	
Naples, FL	1.0360
Collier, FL	
Nashville, TN	0.9430
Cheatham, TN	
Davidson, TN	
Dickson, TN	
Robertson, TN	
Rutherford, TN	
Sumner, TN	
Williamson, TN	
Wilson, TN	
*Nassau-Suffolk, NY	1.3003
Nassau, NY	
Suffolk, NY	
New Bedford-Fall River-Attleboro, MA	1.0198
Bristol, MA	
New Haven-Waterbury-Meriden, CT	1.1883
New Haven, CT	
New London-Norwich, CT	1.1567
New London, CT	
*New Orleans, LA	0.8931
Jefferson, LA	
Orleans, LA	
St. Bernard, LA	
St. Charles, LA	
St. John The Baptist, LA	
St. Tammany, LA	
*New York, NY	1.3506
Bronx, NY	
Kings, NY	
New York City, NY	
Putnam, NY	
Queens, NY	
Richmond, NY	
Rockland, NY	
Westchester, NY	
*Newark, NJ	1.1271
Essex, NJ	
Morris, NJ	
Sussex, NJ	
Union, NJ	
Niagara Falls, NY	0.8411
Niagara, NY	
*Norfolk-Virginia Beach-Newport News, VA	0.8544

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Chesapeake City, VA	
Gloucester, VA	
Hampton City, VA	
James City Co., VA	
Newport News City, VA	
Norfolk City, VA	
Poquoson, VA	
Portsmouth City, VA	
Suffolk City, VA	
Virginia Beach City, VA	
Williamsburg City, VA	
York, VA	
*Oakland, CA	1.4332
Alameda, CA	
Contra Costa, CA	
Ocala, FL	0.8644
Marion, FL	
Odessa, TX	0.8996
Ector, TX	
Oklahoma City, OK	0.9176
Canadian, OK	
Cleveland, OK	
Logan, OK	
McClain, OK	
Oklahoma, OK	
Pottawatomie, OK	
Olympia, WA	1.1040
Thurston, WA	
Omaha, NE-IA	0.9020
Pottawattamie, IA	
Douglas, NE	
Sarpy, NE	
Washington, NE	
Orange County, NY	0.9649
Orange, NY	
Orlando, FL	0.9639
Orange, FL	
Osceola, FL	
Seminole, FL	
Owensboro, KY	0.8189
Daviess, KY	
Oxnard-Ventura, CA	1.2549
Ventura, CA	
Panama City, FL	0.8597
Bay, FL	
Parkersburg-Marietta, WV-OH	0.8569
Washington, OH	
Wood, WV	
Pascagoula, MS	0.8785
Jackson, MS	
Pensacola, FL	0.8653
Escambia, FL	
Santa Rosa, FL	
Peoria, IL	0.8875
Peoria, IL	
Tazewell, IL	
Woodford, IL	
*Philadelphia, PA-NJ	1.0990
Burlington, NJ	
Camden, NJ	
Gloucester, NJ	
Bucks, PA	
Chester, PA	
Delaware, PA	
Montgomery, PA	
Philadelphia, PA	
*Phoenix, AZ	1.0464
Maricopa, AZ	
Pine Bluff, AR	0.7899
Jefferson, AR	
*Pittsburgh, PA	1.0162

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Allegheny, PA	
Fayette, PA	
Washington, PA	
Westmoreland, PA	
Pittsfield, MA	1.0819
Berkshire, MA	
Ponce, PR	0.4826
Juana Diaz, PR	
Ponce, PR	
Portland, ME	0.9320
Cumberland, ME	
Sagadahoc, ME	
York, ME	
*Portland, OR	1.1618
Clackamas, OR	
Multnomah, OR	
Washington, OR	
Yamhill, OR	
Portsmouth-Dover-Rochester, NH	1.0115
Rockingham, NH	
Strafford, NH	
Poughkeepsie, NY	1.0483
Dutchess; NY	
*Providence-Pawtucket-Woonsocket, RI	1.0584
Bristol, RI	
Kent, RI	
Newport, RI	
Providence, RI	
Washington, RI	
Provo-Orem, UT	0.9727
Utah, UT	
Pueblo, CO	0.8752
Pueblo, CO	
Racine, WI	0.8880
Racine, WI	
Raleigh-Durham, NC	0.9498
Durham, NC	
Franklin, NC	
Orange, NC	
Wake, NC	
Rapid City, SD	0.8429
Pennington, SD	
Reading, PA	0.8818
Berks, PA	
Redding, CA	1.0585
Shasta, CA	
Reno, NV	1.1658
Washoe, NV	
Richland-Kennewick, WA	0.9434
Benton, WA	
Franklin, WA	
Richmond-Petersburg, VA	0.9450
Charles City Co., VA	
Chesterfield, VA	
Colonial Heights City, VA	
Dinwiddie, VA	
Goochland, VA	
Hanover, VA	
Henrico, VA	
Hopewell City, VA	
New Kent, VA	
Petersburg City, VA	
Powhatan, VA	
Prince George, VA	
Richmond City, VA	
*Riverside-San Bernardino, CA	1.1190
Riverside, CA	
San Bernardino, CA	
Roanoke, VA	0.8313
Botetourt, VA	
Roanoke, VA	
Roanoke City, VA	
Salem City, VA	
Rochester, MN	1.1067

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Olmsted, MN	
Rochester, NY	0.9744
Livingston, NY	
Monroe, NY	
Ontario, NY	
Orleans, NY	
Wayne, NY	
Rockford, IL	0.9315
Boone, IL	
Winnebago, IL	
*Sacramento, CA	1.2274
Eldorado, CA	
Placer, CA	
Sacramento, CA	
Yolo, CA	
Saginaw-Bay City-Midland, MI	1.0153
Bay, MI	
Midland, MI	
Saginaw, MI	
St. Cloud, MN	0.9453
Benton, MN	
Sherburne, MN	
Stearns, MN	
St. Joseph, MO	0.9416
Buchanan, MO	
*St. Louis, MO-IL	0.9399
Clinton, IL	
Jersey, IL	
Madison, IL	
Monroe, IL	
St. Clair, IL	
Franklin, MO	
Jefferson, MO	
St. Charles, MO	
St. Louis, MO	
St. Louis City, MO	
Salem, OR	1.0481
Marion, OR	
Polk, OR	
Salinas-Seaside-Monterey, CA	1.3086
Monterey, CA	
*Salt Lake City-Ogden, UT	0.8812
Davis, UT	
Salt Lake, UT	
Weber, UT	
San Angelo, TX	0.8167
Tom Green, TX	
*San Antonio, TX	0.8433
Bexar, TX	
Comal, TX	
Guadalupe, TX	
*San Diego, CA	1.1880
San Diego, CA	
*San Francisco, CA	1.4314
Marin, CA	
San Francisco, CA	
San Mateo, CA	
*San Jose, CA	1.4698
Santa Clara, CA	
*San Juan, PR	0.5004
Barcelona, PR	
Bayamón, PR	
Canovanas, PR	
Carolina, PR	
Cataño, PR	
Corozal, PR	
Dorado, PR	
Fajardo, PR	
Florida, PR	
Guaynabo, PR	
Humacao, PR	
Juncos, PR	
Las Piedras, PR	
Loiza, PR	
Luquillo, PR	
Manati, PR	
Naranjito, PR	
Rio Grande, PR	
San Juan, PR	
Toa Alta, PR	
Toa Baja, PR	
Trujillo Alto, PR	
Vega Alta, PR	
Vega Baja, PR	
Santa Barbara-Santa Maria-Lompoc, CA	1.1809
Santa Barbara, CA	
Santa Cruz, CA	1.2828
Santa Cruz, CA	
Santa Fe, NM	0.9170
Los Alamos, NM	
Santa Fe, NM	
Santa Rosa-Petaluma, CA	1.3021
Sonoma, CA	
Sarasota, FL	0.9814
Sarasota, FL	
Savannah, GA	0.8356
Chatham, GA	
Effingham, GA	
Scranton-Wilkes Barre, PA	0.8966
Columbia, PA	
Lackawanna, PA	
Luzerne, PA	
Monroe, PA	
Wyoming, PA	
*Seattle, WA	1.0908
King, WA	
Snohomish, WA	
Sharon, PA	0.9092
Mercer, PA	
Sheboygan, WI	0.8902
Sheboygan, WI	
Sherman-Denison, TX	0.9113
Grayson, TX	
Shreveport, LA	0.9331
Bossier, LA	
Caddo, LA	
Sioux City, IA-NE	0.8533
Woodbury, IA	
Dakota, NE	
Sioux Falls, SD	0.8663
Minnehaha, SD	
South Bend-Mishawaka, IN	1.0102
St. Joseph, IN	
Spokane, WA	1.0728
Spokane, WA	
Springfield, IL	0.9327
Menard, IL	
Sangamon, IL	
Springfield, MO	0.8133
Christian, MO	
Greene, MO	
Springfield, MA	1.0254
Hampden, MA	
Hampshire, MA	
State College, PA	0.9935
Centre, PA	
Steubenville-Weirton, OH-WV	0.8742
Jefferson, OH	
Brooke, WV	
Hancock, WV	
Stockton, CA	1.1289
San Joaquin, CA	
Syracuse, NY	0.9594
Madison, NY	
Onondaga, NY	
Oswego, NY	
Tacoma, WA	1.0353
Pierce, WA	
Tallahassee, FL	0.9008
Gadsden, FL	
Leon, FL	
*Tampa-St. Petersburg-Clearwater, FL	0.9220
Hernando, FL	
Hillsborough, FL	
Pasco, FL	
Pinellas, FL	
Terre Haute, IN	0.8788
Clay, IN	
Vigo, IN	
Texarkana, TX-Texarkana, AR	0.7919
Miller, AR	
Bowie, TX	
Toledo, OH	0.9957
Fulton, OH	
Lucas, OH	
Wood, OH	
Topeka, KS	0.9299
Shawnee, KS	
Trenton, NJ	1.0073
Mercer, NJ	
Tucson, AZ	0.9624
Pima, AZ	
Tulsa, OK	0.8461
Creeks, OK	
Osage, OK	
Rogers, OK	
Tulsa, OK	
Wagoner, OK	
Tuscaloosa, AL	0.8610
Tuscaloosa, AL	
Tyler, TX	0.9664
Smith, TX	
Utica-Rome, NY	0.8352
Herkimer, NY	
Oneida, NY	
Vallejo-Fairfield-Napa, CA	1.3221
Napa, CA	
Solano, CA	
Vancouver, WA	1.0836
Clark, WA	
Victoria, TX	0.8967
Victoria, TX	
Vineland-Millville-Bridgeton, NJ	0.9793
Cumberland, NJ	
Visalia-Tulare-Porterville, CA	1.1101
Tulare, CA	
Waco, TX	0.7857
McLennan, TX	
*Washington, DC-MD-VA	1.0978
District of Columbia, DC	

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

[Areas that qualify as large urban areas are designated with an asterisk]

Urban area (constituent counties or county equivalents)	Wage index
Calvert, MD	
Charles, MD	
Frederick, MD	
Montgomery, MD	
Prince Georges, MD	
Alexandria City, VA	
Arlington, VA	
Fairfax, VA	
Fairfax City, VA	
Falls Church City, VA	
Loudoun, VA	
Manassas City, VA	
Manassas Park City, VA	
Prince William, VA	
Stafford, VA	
Waterloo-Cedar Falls, IA	0.8667
Black Hawk, IA	
Bremer, IA	
Wausau, WI	0.9782
Marathan, WI	
West Palm Beach-Boca Raton-Delray Beach, FL	1.0170
Palm Beach, FL	
Wheeling, WV-OH	0.7865
Belmont, OH	
Marshall, WV	
Ohio, WV	
Wichita, KS	0.9843
Butler, KS	
Harvey, KS	
Sedgwick, KS	
Wichita Falls, TX	0.7919
Wichita, TX	
Williamsport, PA	0.8887
Lycoming, PA	
Wilmington, DE-NJ-MD	1.0906
New Castle, DE	
Cecil, MD	
Salem, NJ	
Wilmington, NC	0.8742
New Hanover, NC	
Worcester-Fitchburg-Leominster, MA	1.0413
Worcester, MA	
Yakima, WA	1.0146
Yakima, WA	
York, PA	0.9052
Adams, PA	
York, PA	
Youngstown-Warren, OH	0.9900
Mahoning, OH	
Trumbull, OH	
Yuba City, CA	1.0202
Sutter, CA	
Yuba, CA	
Yuma, AZ	0.8916

TABLE 4b.—WAGE INDEX FOR RURAL AREAS

Nonurban area	Wage index
Alabama	0.7106
Alaska	1.3472
Arizona	0.8626
Arkansas	0.6990
California	1.0155
Colorado	0.8438
Connecticut	1.1468
Delaware	0.8601
Florida	0.8760
Georgia	0.7754
Hawaii	0.9599

TABLE 4b.—WAGE INDEX FOR RURAL AREAS—Continued

Nonurban area	Wage index
Idaho	0.8983
Illinois	0.7738
Indiana	0.7774
Iowa	0.7533
Kansas	0.7475
Kentucky	0.7820
Louisiana	0.7341
Maine	0.8321
Maryland	0.8089
Massachusetts	1.1320
Michigan	0.8847
Minnesota	0.8337
Mississippi	0.6836
Missouri	0.7202
Montana	0.8283
Nebraska	0.7043
Nevada	0.9735
New Hampshire	0.9420
New Jersey [1]	
New Mexico	0.8153
New York	0.8445
North Carolina	0.7897
North Dakota	0.7745
Ohio	0.8433
Oklahoma	0.7414
Oregon	0.9394
Pennsylvania	0.8668
Puerto Rico	0.4645
Rhode Island [1]	
South Carolina	0.7637
South Dakota	0.7193
Tennessee	0.7351
Texas	0.7560
Utah	0.9013
Vermont	0.9066
Virginia	0.7832
Washington	0.9668
West Virginia	0.8535
Wisconsin	0.8435
Wyoming	0.8486

[1] All counties within the State are classified urban.

TABLE 4c.—WAGE INDEX FOR RURAL COUNTIES WHOSE HOSPITALS ARE DEEMED URBAN—USING URBAN AREA WAGE INDEX

County	Urban area	Wage index
Macoupin Co., IL	St. Louis, MO-IL	0.9399
Mason Co., IL	Peoria, IL	0.8875
Clinton, IN	Lafayette,IN	0.8461
Jefferson Co., KS	Topeka, KS	0.9299
Allegan Co., MI	Grand Rapids, MI	0.9917
Berry Co., MI	Battle Creek, MI	0.9497
Cherokee Co., MI	Greenville-Spartanburg, SC.	0.8848
Shiawassee Co., MI	Flint, MI	1.1583
Clinton Co., MO	Kansas City, MO-KS.	0.9620
Bedford Co., VA	Roanoke, VA	0.8313
Fredericksburg City, VA.	Washington, DC-MD-VA.	1.0978
Jefferson Co., WI	Milwaukee, WI	0.9752
Jefferson Co., WV	Washington, DC-MD-VA.	1.0978
Walworth Co., WI	Milwaukee, WI	0.9752

TABLE 4d.—WAGE INDEX FOR RURAL COUNTIES WHOSE HOSPITALS ARE DEEMED URBAN—COMPUTED AS SEPARATE URBAN AREAS

County	Urban area	Wage index
Limestone Co., AL	Huntsville, AL	0.7398
Charlotte Co., FL	Sarasota, FL	0.8800
Indian River Co., FL	Fort Pierce, FL	0.9077
Henry Co., IN	Anderson, IN	0.8795
Lenawee Co., MI	Ann Arbor, MI	0.9146

TABLE 4e.—WAGE INDEX FOR RURAL COUNTIES WHOSE HOSPITALS ARE DEEMED URBAN—USING STATEWIDE RURAL WAGE INDEX

County	Urban area	Wage index
Marshall Co., AL	Huntsville, AL	0.7106
Christian Co., IL	Springfield, IL	0.7738
Cass Co., MI	Benton Harbor, MI	0.8847
Ionia Co., MI	Lansing-East Lansing, MI.	0.8847
Tuscola Co., MI	Saginaw-Bay City-Midland, MI.	0.8847
Van Buren Co., MI	Kalamazoo, MI	0.8847
Genesee Co., NY	Rochester, NY	0.8445
Harnett Co., NC	Fayetteville, NC	0.7897
Columbiana Co., OH	Beaver County, PA	0.8433
Morrow Co., OH	Mansfield, OH	0.8433
Van Wert Co., OH	Lima, OH	0.8433
Lawrence Co., PA	Beaver County, PA	0.8668

TABLE 4f.—WAGE AREAS SUBJECT TO WAGE INDEX PHASE-IN (WAGE INDEX VALUES INCREASE/DECREASE MORE THAN 8 PERCENT FROM FY 1990 (1984 WAGE DATA) TO FY 1991 (1988 WAGE DATA))

Area	Actual wage index	FY 1991 wage index
Florence, AL	0.7705	0.7681
Tuscaloosa, AL	0.8551	0.8610
Fayetteville-Springdale, AR	0.8017	0.7995
Fort Smith, AR	0.7959	0.8003
Little Rock-North Little Rock, AR	0.8449	0.8475
Modesto, CA	1.1582	1.1569
Oxnard-Ventura, CA	1.2309	1.2549
Santa Rosa-Petaluma, CA	1.2987	1.3021
Visalia-Tulare-Porterville, CA	1.0428	1.1101
Denver, CO	1.0795	1.0805
Greeley, CO	0.9390	0.9394
Connecticut (Rural)	1.1946	1.1468
Hartford-Middletown-New Britton-Bristol, CT	1.1957	1.1916
New Haven-West Haven-Waterbury-Meriden, CT	1.2136	1.1883
New London-Norwich, CT	1.1611	1.1567
Fort Myers-Cape Coral, FL	0.9833	0.9778
Fort Walton Beach, FL	0.8947	0.8892
Panama City, FL	0.8662	0.8597
Tallahassee, FL	0.9252	0.9008
Macon-Warner Robins, GA	0.8834	0.8631
Hawaii (Rural)	0.9651	0.9599
Davenport-Rock Island-Moline, IA-IL	0.8500	0.8595
Dubuque, IA	0.8403	0.8551
Iowa City, IA	0.9561	0.9818

TABLE 4f.—WAGE AREAS SUBJECT TO WAGE INDEX PHASE-IN (WAGE INDEX VALUES INCREASE/DECREASE MORE THAN 8 PERCENT FROM FY 1990 (1984 WAGE DATA) TO FY 1991 (1988 WAGE DATA))—Continued

Area	Actual wage index	FY 1991 wage index
Bloomington-Normal, IL	0.8688	0.8786
Peoria, IL	0.8740	0.8875
Waterloo-Cedar Falls, IL	0.8634	0.8667
Muncie, IN	0.8096	0.8488
Evansville, IN-KY	0.9308	0.9393
Lawrence, KS	0.8967	0.9042
Owensboro, KY	0.8142	0.8189
Lafayette, LA	0.8255	0.8269
Massachusetts (Rural)	1.1694	1.1320
Boston-Lowell-Brockton-Lawrence, MA	1.1820	1.1749
Worcester-Fitchburg-Ledminster, MA	1.0657	1.0413
Cumberland, MD-WV	0.8216	0.8304
Lenewee Co., MI [1]	0.8869	0.9146
Columbia, MO	09482	0.9515

TABLE 4f.—WAGE AREAS SUBJECT TO WAGE INDEX PHASE-IN (WAGE INDEX VALUES INCREASE/DECREASE MORE THAN 8 PERCENT FROM FY 1990 (1984 WAGE DATA) TO FY 1991 (1988 WAGE DATA))—Continued

Area	Actual wage index	FY 1991 wage index
Joplin, MO	0.7908	0.7926
St. Joseph, MO	0.9446	0.9416
Springfield, MO	0.8110	0.8133
Charlotte-Gastonia-Rock Hill, NC-SC	0.9519	0.9281
Nebraska (Rural)	0.7020	0.7043
Manchester-Nashua, NH	1.0296	1.0216
Orange County, NY	0.9686	0.9649
Lima OH	0.8120	0.8282
Tulsa, OK	0.8424	0.8461
Puerto Rico (Rural)	0.4348	0.4645
Arecibo, PR	0.3967	0.3994
Caguas, PR	0.4494	0.4393
Ponce, PR	0.4617	0.4826
Providence-Pawtucket-Woonsocket, RI	1.0654	1.0584

TABLE 4f.—WAGE AREAS SUBJECT TO WAGE INDEX PHASE-IN (WAGE INDEX VALUES INCREASE/DECREASE MORE THAN 8 PERCENT FROM FY 1990 (1984 WAGE DATA) TO FY 1991 (1988 WAGE DATA))—Continued

Area	Actual wage index	FY 1991 wage index
Florence, SC	0.8458	0.8389
Amarillo, TX	0.8769	0.8795
Galveston-Texas City, TX	0.9453	0.9704
Lubbock, TX	0.8713	0.8825
Victoria, TX	0.9025	0.8967
Waco, TX	0.7812	0.7857
Charlottesville, VA	0.9648	0.9600
Kenosha, WI	0.8885	0.9285
Wheeling, WV-OH	0.7860	0.7865
Cheyenne, WY	0.7935	0.8009

[1] Rural counties whose hospitals are deemed urban and computed as separate urban areas.

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TABLE 5

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
1	01	SURG	CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.3580	12.9	42
2	01	SURG	CRANIOTOMY FOR TRAUMA AGE >17	3.5485	12.1	41
3	01	SURG	CRANIOTOMY AGE 0-17	2.8830	12.7	42
4	01	SURG	SPINAL PROCEDURES	2.4532	10.8	40
5	01	SURG	EXTRACRANIAL VASCULAR PROCEDURES	1.5246	5.8	35
6	01	SURG	CARPAL TUNNEL RELEASE	.4823	2.0	19
7	01	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC WITH CC	2.6823	11.5	41
8	01	SURG	PERIPH & CRANIAL NERVE & OTHER NERV SYST PROC W/O CC	.7451	3.0	32
9	01	MED	SPINAL DISORDERS & INJURIES	1.2229	6.9	36
10	01	MED	NERVOUS SYSTEM NEOPLASMS WITH CC	1.2765	7.8	37
11	01	MED	NERVOUS SYSTEM NEOPLASMS W/O CC	.7771	4.7	34
12	01	MED	DEGENERATIVE NERVOUS SYSTEM DISORDERS	.9256	6.9	36
13	01	MED	MULTIPLE SCLEROSIS & CEREBELLAR ATAXIA	.8726	7.1	36
14	01	MED	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.2212	7.3	36
15	01	MED	TRANSIENT ISCHEMIC ATTACK & PRECEREBRAL OCCLUSIONS	.6420	4.2	33
16	01	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W CC	1.0703	6.7	36
17	01	MED	NONSPECIFIC CEREBROVASCULAR DISORDERS W/O CC	.6326	4.4	33
18	01	MED	CRANIAL & PERIPHERAL NERVE DISORDERS WITH CC	.8749	6.0	35
19	01	MED	CRANIAL & PERIPHERAL NERVE DISORDERS W/O CC	.5629	3.9	33
20	01	MED	NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	1.8683	8.4	37
21	01	MED	VIRAL MENINGITIS	1.4439	7.5	37
22	01	MED	HYPERTENSIVE ENCEPHALOPATHY	.7206	4.4	33
23	01	MED	NONTRAUMATIC STUPOR & COMA	.8322	4.3	33
24	01	MED	SEIZURE & HEADACHE AGE >17 WITH CC	.9602	5.3	34
25	01	MED	SEIZURE & HEADACHE AGE >17 W/O CC	.5197	3.5	28
26	01	MED	SEIZURE & HEADACHE AGE 0-17	.8176	4.0	33
27	01	MED	TRAUMATIC STUPOR & COMA, COMA >1 HR	1.3481	4.3	33
28	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 WITH CC	1.2060	5.9	35
29	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE >17 W/O CC	.5674	3.3	32
30	01	MED	TRAUMATIC STUPOR & COMA, COMA <1 HR AGE 0-17	.3496	2.0	17
31	01	MED	CONCUSSION AGE >17 WITH CC	.6933	4.2	33
32	01	MED	CONCUSSION AGE >17 W/O CC	.4100	2.7	25
33	01	MED	CONCUSSION AGE 0-17	.2427	1.6	9
34	01	MED	OTHER DISORDERS OF NERVOUS SYSTEM WITH CC	1.1714	6.0	35
35	01	MED	OTHER DISORDERS OF NERVOUS SYSTEM W/O CC	.5464	3.6	33

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

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LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
36	02	SURG	RETINAL PROCEDURES	.6487	2.3	13
37	02	SURG	ORBITAL PROCEDURES	.7431	2.9	32
38	02	SURG	PRIMARY IRIS PROCEDURES	.3614	2.2	17
39	02	SURG	LENS PROCEDURES WITH OR WITHOUT VITRECTOMY	.4456	1.6	8
40	02	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	.4923	2.0	21
41	02	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	.3613	1.6	7
42	02	SURG	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS & LENS	.6202	2.2	16
43	02	MED	HYPHEMA	.3867	4.0	32
44	02	MED	ACUTE MAJOR EYE INFECTIONS	.5979	5.5	35
45	02	MED	NEUROLOGICAL EYE DISORDERS	.5650	3.4	29
46	02	MED	OTHER DISORDERS OF THE EYE AGE >17 W CC	.6701	4.2	33
47	02	MED	OTHER DISORDERS OF THE EYE AGE >17 W/O CC	.3608	2.6	28
48	02	MED	OTHER DISORDERS OF THE EYE AGE 0-17	.3969	2.9	30
49	03	SURG	MAJOR HEAD & NECK PROCEDURES	2.3273	7.4	36
50	03	SURG	SIALOADENECTOMY	.6413	2.2	14
51	03	SURG	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	.5822	2.1	20
52	03	SURG	CLEFT LIP & PALATE REPAIR	.7394	2.6	25
53	03	SURG	SINUS & MASTOID PROCEDURES AGE >17	.6308	1.9	19
54	03	SURG	SINUS & MASTOID PROCEDURES AGE 0-17	.6806	3.2	22
55	03	SURG	MISCELLANEOUS EAR, NOSE, MOUTH & THROAT PROCEDURES	.4905	1.6	13
56	03	SURG	RHINOPLASTY	.4982	1.7	13
57	03	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	.8774	3.4	32
58	03	SURG	T&A PROC, EXCEPT TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	.3060	1.5	4
59	03	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE >17	.4192	1.6	12
60	03	SURG	TONSILLECTOMY &/OR ADENOIDECTOMY ONLY, AGE 0-17	.2584	1.5	4
61	03	SURG	MYRINGOTOMY W TUBE INSERTION AGE >17	.7656	2.3	31
62	03	SURG	MYRINGOTOMY W TUBE INSERTION AGE 0-17	.3052	1.3	5
63	03	SURG	OTHER EAR, NOSE, MOUTH & THROAT O.R. PROCEDURES	1.0111	3.8	33
64	03	MED	EAR, NOSE, MOUTH & THROAT MALIGNANCY	1.0651	5.0	34
65	03	MED	DYSEQUILIBRIUM	.4636	3.3	23
66	03	MED	EPISTAXIS	.4528	3.3	24
67	03	MED	EPIGLOTTITIS	.8478	4.3	33
68	03	MED	OTITIS MEDIA & URI AGE >17 WITH CC	.7209	4.9	33
69	03	MED	OTITIS MEDIA & URI AGE >17 W/O CC	.5086	3.8	24
70	03	MED	OTITIS MEDIA & URI AGE 0-17	.2830	2.3	13

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

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LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
71	03	MED	LARYNGOTRACHEITIS	.7030	4.3	27
72	03	MED	NASAL TRAUMA & DEFORMITY	.5547	3.2	32
73	03	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE >17	.7291	4.1	33
74	03	MED	OTHER EAR, NOSE, MOUTH & THROAT DIAGNOSES AGE 0-17	.3386	2.1	20
75	04	SURG	MAJOR CHEST PROCEDURES	2.9860	11.7	41
76	04	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W CC	2.3074	10.5	39
77	04	SURG	OTHER RESP SYSTEM O.R. PROCEDURES W/O CC	1.0413	4.6	34
78	04	MED	PULMONARY EMBOLISM	1.4372	8.8	38
79	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 WITH CC	1.8144	9.3	38
80	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE >17 W/O CC	1.0404	6.8	36
81	04	MED	RESPIRATORY INFECTIONS & INFLAMMATIONS AGE 0-17	1.0899	6.1	35
82	04	MED	RESPIRATORY NEOPLASMS	1.2178	6.7	36
83	04	MED	MAJOR CHEST TRAUMA WITH CC	.9628	6.3	35
84	04	MED	MAJOR CHEST TRAUMA W/O CC	.4846	3.7	28
85	04	MED	PLEURAL EFFUSION WITH CC	1.1509	6.8	36
86	04	MED	PLEURAL EFFUSION W/O CC	.6961	4.4	33
87	04	MED	PULMONARY EDEMA & RESPIRATORY FAILURE	1.3895	6.0	35
88	04	MED	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	.9973	5.9	35
89	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 WITH CC	1.1878	7.2	36
90	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE >17 W/O CC	.7538	5.6	31
91	04	MED	SIMPLE PNEUMONIA & PLEURISY AGE 0-17	.8141	5.2	34
92	04	MED	INTERSTITIAL LUNG DISEASE WITH CC	1.2131	6.9	36
93	04	MED	INTERSTITIAL LUNG DISEASE W/O CC	.7598	4.9	34
94	04	MED	PNEUMOTHORAX WITH CC	1.2763	7.2	36
95	04	MED	PNEUMOTHORAX W/O CC	.6533	4.6	34
96	04	MED	BRONCHITIS & ASTHMA AGE >17 WITH CC	.9568	6.0	35
97	04	MED	BRONCHITIS & ASTHMA AGE >17 W/O CC	.6561	4.6	26
98	04	MED	BRONCHITIS & ASTHMA AGE 0-17	.6135	4.6	22
99	04	MED	RESPIRATORY SIGNS & SYMPTOMS WITH CC	.8361	4.4	33
100	04	MED	RESPIRATORY SIGNS & SYMPTOMS W/O CC	.5090	2.7	19
101	04	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES WITH CC	.9181	5.1	34
102	04	MED	OTHER RESPIRATORY SYSTEM DIAGNOSES W/O CC	.5400	3.4	32
103	05	SURG	HEART TRANSPLANT	12.9086	25.0	54
104	05	SURG	CARDIAC VALVE PROCEDURES W CARDIAC CATH	8.0641	18.3	47
105	05	SURG	CARDIAC VALVE PROCEDURES W/O CARDIAC CATH	6.0750	13.0	42

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** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE. RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

TABLE 5

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
106	05	SURG	CORONARY BYPASS W CARDIAC CATH	5.4227	13.9	43
107	05	SURG	CORONARY BYPASS W/O CARDIAC CATH	4.7899	11.2	40
108	05	SURG	OTHER CARDIOTHORACIC PROCEDURES	5.9649	12.9	42
109	05	SURG	NO LONGER VALID	0.0000	.0	0
110	05	SURG	MAJOR CARDIOVASCULAR PROCEDURES WITH CC	4.2644	10.5	39
111	05	SURG	MAJOR CARDIOVASCULAR PROCEDURES W/O CC	2.4493	8.1	37
112	05	SURG	PERCUTANEOUS CARDIOVASCULAR PROCEDURES	1.9910	4.9	34
113	05	SURG	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB & TOE	2.6279	14.5	44
114	05	SURG	UPPER LIMB & TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	1.5827	9.3	38
115	05	SURG	PERM CARDIAC PACEMAKER IMPLANT W AMI, HEART FAILURE OR SHOCK	3.7705	12.1	41
116	05	SURG	PERM CARDIAC PACEMAKER IMPLANT W/O AMI, HEART FAILURE OR SHOCK	2.5190	5.8	35
117	05	SURG	CARDIAC PACEMAKER REVISION EXCEPT DEVICE REPLACEMENT	1.3520	3.8	33
118	05	SURG	CARDIAC PACEMAKER DEVICE REPLACEMENT	1.7375	3.0	32
119	05	SURG	VEIN LIGATION & STRIPPING	.8169	3.4	32
120	05	SURG	OTHER CIRCULATORY SYSTEM O.R. PROCEDURES	2.5143	10.2	39
121	05	MED	CIRCULATORY DISORDERS W AMI & C.V. COMP DISCH ALIVE	1.5772	8.2	37
122	05	MED	CIRCULATORY DISORDERS W AMI W/O C.V. COMP DISCH ALIVE	1.1152	5.9	35
123	05	MED	CIRCULATORY DISORDERS W AMI, EXPIRED	1.3704	3.0	32
124	05	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH & COMPLEX DIAG	1.1816	4.3	33
125	05	MED	CIRCULATORY DISORDERS EXCEPT AMI, W CARD CATH W/O COMPLEX DIAG	.7015	2.2	21
126	05	MED	ACUTE & SUBACUTE ENDOCARDITIS	2.9543	17.0	46
127	05	MED	HEART FAILURE & SHOCK	1.0040	6.1	35
128	05	MED	DEEP VEIN THROMBOPHLEBITIS	.8061	7.7	34
129	05	MED	CARDIAC ARREST, UNEXPLAINED	1.3242	2.6	32
130	05	MED	PERIPHERAL VASCULAR DISORDERS WITH CC	.8969	6.0	35
131	05	MED	PERIPHERAL VASCULAR DISORDERS W/O CC	.5841	4.4	33
132	05	MED	ATHEROSCLEROSIS WITH CC	.7252	4.1	33
133	05	MED	ATHEROSCLEROSIS W/O CC	.5205	3.1	26
134	05	MED	HYPERTENSION	.5992	4.2	33
135	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE > 17 WITH CC	.8623	4.9	34
136	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE > 17 W/O CC	.5507	3.3	26
137	05	MED	CARDIAC CONGENITAL & VALVULAR DISORDERS AGE 0-17	.6239	3.3	32
138	05	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS WITH CC	.8331	4.6	34
139	05	MED	CARDIAC ARRHYTHMIA & CONDUCTION DISORDERS W/O CC	.5325	3.2	24
140	05	MED	ANGINA PECTORIS	.6296	3.8	25

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TABLE 5

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
141	05	MED	SYNCOPE & COLLAPSE WITH CC	.6899	4.4	33
142	05	MED	SYNCOPE & COLLAPSE W/O CC	.5012	3.2	22
143	05	MED	CHEST PAIN	.5140	2.8	18
144	05	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W CC	1.0849	5.5	34
145	05	MED	OTHER CIRCULATORY SYSTEM DIAGNOSES W/O CC	.5933	3.2	29
146	06	SURG	RECTAL RESECTION WITH CC	2.5864	13.0	42
147	06	SURG	RECTAL RESECTION W/O CC	1.6406	9.5	36
148	06	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES WITH CC	3.1996	13.9	43
149	06	SURG	MAJOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.6044	9.4	31
150	06	SURG	PERITONEAL ADHESIOLYSIS WITH CC	2.5312	11.8	41
151	06	SURG	PERITONEAL ADHESIOLYSIS W/O CC	1.2777	7.4	36
152	06	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES WITH CC	1.4769	7.6	37
153	06	SURG	MINOR SMALL & LARGE BOWEL PROCEDURES W/O CC	1.0170	6.4	33
154	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE > 17 WITH CC	3.6320	12.4	41
155	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE > 17 W/O CC	1.4768	7.4	36
156	06	SURG	STOMACH, ESOPHAGEAL & DUODENAL PROCEDURES AGE 0-17	.8281	6.0	35
157	06	SURG	ANAL & STOMAL PROCEDURES WITH CC	.9248	4.8	34
158	06	SURG	ANAL & STOMAL PROCEDURES W/O CC	.4877	2.6	19
159	06	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 WITH CC	1.0797	5.1	34
160	06	SURG	HERNIA PROCEDURES EXCEPT INGUINAL & FEMORAL AGE >17 W/O CC	.6166	3.1	22
161	06	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 WITH CC	.7238	3.3	32
162	06	SURG	INGUINAL & FEMORAL HERNIA PROCEDURES AGE >17 W/O CC	.4428	2.0	12
163	06	SURG	HERNIA PROCEDURES AGE 0-17	.6397	3.2	32
164	06	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG WITH CC	2.2699	10.3	39
165	06	SURG	APPENDECTOMY W COMPLICATED PRINCIPAL DIAG W/O CC	1.2944	7.2	25
166	06	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG WITH CC	1.3818	6.6	36
167	06	SURG	APPENDECTOMY W/O COMPLICATED PRINCIPAL DIAG W/O CC	.7745	4.2	16
168	03	SURG	MOUTH PROCEDURES WITH CC	.9806	3.7	33
169	03	SURG	MOUTH PROCEDURES W/O CC	.5558	2.1	18
170	06	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES WITH CC	2.7171	11.1	40
171	06	SURG	OTHER DIGESTIVE SYSTEM O.R. PROCEDURES W/O CC	1.1583	5.7	35
172	06	MED	DIGESTIVE MALIGNANCY WITH CC	1.2445	7.2	36
173	06	MED	DIGESTIVE MALIGNANCY W/O CC	.6358	3.8	33
174	06	MED	G.I. HEMORRHAGE WITH CC	.9537	5.5	34
175	06	MED	G.I. HEMORRHAGE W/O CC	.5756	3.9	24

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TABLE 5

LIST OF DIAGNOSIS RELATED GROUPS (DRGS), RELATIVE WEIGHTING FACTORS, GEOMETRIC MEAN LENGTH OF STAY, AND LENGTH OF STAY, OUTLIER CUTOFF POINTS USED IN THE PROSPECTIVE PAYMENT SYSTEM

				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
176	06	MED	COMPLICATED PEPTIC ULCER	.9830	5.9	35
177	06	MED	UNCOMPLICATED PEPTIC ULCER WITH CC	.7803	5.2	33
178	06	MED	UNCOMPLICATED PEPTIC ULCER W/O CC	.5564	3.9	22
179	06	MED	INFLAMMATORY BOWEL DISEASE	1.0895	7.1	36
180	06	MED	G.I. OBSTRUCTION WITH CC	.9165	5.8	35
181	06	MED	G.I. OBSTRUCTION W/O CC	.5130	4.0	27
182	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 WITH CC	.7497	4.9	34
183	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE >17 W/O CC	.5200	3.5	25
184	06	MED	ESOPHAGITIS, GASTROENT & MISC DIGEST DISORDERS AGE 0-17	.6801	3.2	32
185	03	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE >17	.7548	4.3	33
186	03	MED	DENTAL & ORAL DIS EXCEPT EXTRACTIONS & RESTORATIONS, AGE 0-17	.4062	2.9	23
187	03	MED	DENTAL EXTRACTIONS & RESTORATIONS	.4814	2.2	22
188	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 WITH CC	.9632	5.1	34
189	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >17 W/O CC	.4802	2.9	32
190	06	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	.6312	4.0	28
191	07	SURG	PANCREAS, LIVER & SHUNT PROCEDURES WITH CC.	4.6941	15.9	45
192	07	SURG	PANCREAS, LIVER & SHUNT PROCEDURES W/O CC	1.9662	9.2	38
193	07	SURG	BILIARY TRACT PROC W CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E	3.0102	14.3	43
194	07	SURG	BILIARY TRACT PROC W/O CC EXCEPT ONLY TOT CHOLECYST W OR W/O C.D.E	1.7387	9.8	39
195	07	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. WITH CC	2.2175	11.0	40
196	07	SURG	TOTAL CHOLECYSTECTOMY W C.D.E. W/O CC	1.4183	8.2	30
197	07	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. WITH CC	1.7336	8.6	38
198	07	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. W/O CC	.9445	5.5	20
199	07	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.3168	11.9	41
200	07	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.8940	10.1	39
201	07	SURG	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES	2.4210	8.9	38
202	07	MED	CIRRHOSIS & ALCOHOLIC HEPATITIS	1.2019	7.2	36
203	07	MED	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS	1.1301	6.8	36
204	07	MED	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	1.0617	6.1	35
205	07	MED	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA WITH CC	1.1985	6.7	36
206	07	MED	DISORDERS OF LIVER EXCEPT MALIG,CIRR,ALC HEPA W/O CC	.6210	3.8	33
207	07	MED	DISORDERS OF THE BILIARY TRACT WITH CC	.9569	5.5	35
208	07	MED	DISORDERS OF THE BILIARY TRACT W/O CC	.5599	3.4	27
209	08	SURG	MAJOR JOINT & LIMB REATTACHMENT PROCEDURES	2.3689	10.6	38
210	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 WITH CC	1.9939	12.0	41

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
211	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >17 W/O CC	1.4302	9.6	38
212	08	SURG	HIP & FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	.9981	4.5	16
213	08	SURG	AMPUTATION FOR MUSCULOSKELETAL SYSTEM & CONN TISSUE DISORDERS	1.7562	9.7	39
214	08	SURG	BACK & NECK PROCEDURES WITH CC	1.9298	10.0	39
215	08	SURG	BACK & NECK PROCEDURES W/O CC	1.1550	6.6	35
216	08	SURG	BIOPSIES OF MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	1.8502	9.5	38
217	08	SURG	WND DEBRID & SKN GRFT EXCEPT HAND,FOR MUSCSKELET & CONN TISS DIS	3.1173	14.1	43
218	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE >17 WITH CC	1.4748	7.7	37
219	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE >17 W/O CC	.9194	4.9	31
220	08	SURG	LOWER EXTREM & HUMER PROC EXCEPT HIP,FOOT,FEMUR AGE 0-17	.9130	5.3	34
221	08	SURG	KNEE PROCEDURES WITH CC	1.5919	6.9	36
222	08	SURG	KNEE PROCEDURES W/O CC	.9134	3.8	33
223	08	SURG	MAJOR SHOULDER/ELBOW PROC, OR OTHER UPPER EXTREMITY PROC W CC	.8260	3.5	28
224	08	SURG	SHOULDER,ELBOW OR FOREARM PROC,EXC MAJOR JOINT PROC, W/O CC	.6224	2.6	17
225	08	SURG	FOOT PROCEDURES	.7421	3.2	32
226	08	SURG	SOFT TISSUE PROCEDURES WITH CC	1.3371	6.3	35
227	08	SURG	SOFT TISSUE PROCEDURES W/O CC	.6604	2.9	26
228	08	SURG	MAJOR THUMB OR JOINT PROC,OR OTH HAND OR WRIST PROC W CC	.8148	2.7	30
229	08	SURG	HAND OR WRIST PROC, EXCEPT MAJOR JOINT PROC, W/O CC	.5358	1.9	16
230	08	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES OF HIP & FEMUR	.8508	4.0	33
231	08	SURG	LOCAL EXCISION & REMOVAL OF INT FIX DEVICES EXCEPT HIP & FEMUR	.9306	3.6	33
232	08	SURG	ARTHROSCOPY	.9981	3.6	33
233	08	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC WITH CC	1.8416	8.9	38
234	08	SURG	OTHER MUSCULOSKELET SYS & CONN TISS O.R. PROC W/O CC	.8322	4.1	33
235	08	MED	FRACTURES OF FEMUR	1.1383	7.8	37
236	08	MED	FRACTURES OF HIP & PELVIS	.8516	6.7	36
237	08	MED	SPRAINS, STRAINS, & DISLOCATIONS OF HIP, PELVIS & THIGH	.5424	4.3	33
238	08	MED	OSTEOMYELITIS	1.5682	10.4	39
239	08	MED	PATHOLOGICAL FRACTURES & MUSCULOSKELETAL & CONN TISS MALIGNANCY	1.0035	7.5	37
240	08	MED	CONNECTIVE TISSUE DISORDERS WITH CC	1.1197	7.1	36
241	08	MED	CONNECTIVE TISSUE DISORDERS W/O CC	.5852	4.8	34
242	08	MED	SEPTIC ARTHRITIS	1.2566	8.2	37
243	08	MED	MEDICAL BACK PROBLEMS	.6580	5.0	34
244	08	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES WITH CC	.7228	5.4	34
245	08	MED	BONE DISEASES & SPECIFIC ARTHROPATHIES W/O CC	.5008	4.0	33

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
246	08	MED	NON-SPECIFIC ARTHROPATHIES	.5736	4.5	33
247	08	MED	SIGNS & SYMPTOMS OF MUSCULOSKELETAL SYSTEM & CONN TISSUE	.5332	3.7	33
248	08	MED	TENDONITIS, MYOSITIS & BURSITIS	.6342	4.4	33
249	08	MED	AFTERCARE, MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE	.6320	3.9	33
250	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 WITH CC	.6757	4.4	33
251	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE >17 W/O CC	.4315	2.5	24
252	08	MED	FX, SPRN, STRN & DISL OF FOREARM, HAND, FOOT AGE 0-17	.3454	1.8	15
253	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE >17 WITH CC	.7871	5.9	35
254	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE >17 W/O CC	.4303	3.6	33
255	08	MED	FX, SPRN, STRN & DISL OF UPARM,LOWLEG EX FOOT AGE 0-17	.4582	2.9	32
256	08	MED	OTHER MUSCULOSKELETAL SYSTEM & CONNECTIVE TISSUE DIAGNOSES	.6267	3.9	33
257	09	SURG	TOTAL MASTECTOMY FOR MALIGNANCY WITH CC	.9219	5.0	26
258	09	SURG	TOTAL MASTECTOMY FOR MALIGNANCY W/O CC	.7178	4.0	16
259	09	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY WITH CC	.9581	4.4	33
260	09	SURG	SUBTOTAL MASTECTOMY FOR MALIGNANCY W/O CC	.5764	2.5	16
261	09	SURG	BREAST PROC FOR NON-MALIGNANCY EXCEPT BIOPSY & LOCAL EXCISION	.6509	2.3	15
262	09	SURG	BREAST BIOPSY & LOCAL EXCISION FOR NON-MALIGNANCY	.4537	1.9	15
263	09	SURG	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS WITH CC	2.7750	16.0	45
264	09	SURG	SKIN GRAFT &/OR DEBRID FOR SKN ULCER OR CELLULITIS W/O CC	1.3569	9.2	38
265	09	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W CC	1.3538	6.1	35
266	09	SURG	SKIN GRAFT &/OR DEBRID EXCEPT FOR SKIN ULCER OR CELLULITIS W/O CC	.6682	3.0	32
267	09	SURG	PERIANAL & PILONIDAL PROCEDURES	.6003	2.8	32
268	09	SURG	SKIN, SUBCUTANEOUS TISSUE & BREAST PLASTIC PROCEDURES	.7210	2.7	32
269	09		OTHER SKIN, SUBCUT TISS & BREAST PROCEDURE WITH CC	1.7063	8.3	37
270	09		OTHER SKIN, SUBCUT TISS & BREAST PROCEDURE W/O CC	.6709	3.2	32
271	09	MED	SKIN ULCERS	1.2568	9.0	38
272	09	MED	MAJOR SKIN DISORDERS WITH CC	1.0177	7.2	36
273	09	MED	MAJOR SKIN DISORDERS W/O CC	.6664	5.5	35
274	09	MED	MALIGNANT BREAST DISORDERS WITH CC	1.1101	6.6	36
275	09	MED	MALIGNANT BREAST DISORDERS W/O CC	.5443	3.2	32
276	09	MED	NON-MALIGANT BREAST DISORDERS	.5710	3.6	33
277	09	MED	CELLULITIS AGE >17 WITH CC	.9269	7.1	36
278	09	MED	CELLULITIS AGE >17 W/O CC	.6278	5.4	31
279	09	MED	CELLULITIS AGE 0-17	.7278	4.2	24
280	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 WITH CC	.6538	4.6	34

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
281	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE >17 W/O CC	.4169	3.2	31
282	09	MED	TRAUMA TO THE SKIN, SUBCUT TISS & BREAST AGE 0-17	.3383	2.2	19
283	09	MED	MINOR SKIN DISORDERS WITH CC	.7401	5.4	34
284	09	MED	MINOR SKIN DISORDERS W/O CC	.4544	3.6	33
285	10	SURG	AMPUTAT OF LOWER LIMB FOR ENDOCRINE,NUTRIT,& METABOL DISORDERS	2.7822	15.5	45
286	10	SURG	ADRENAL & PITUITARY PROCEDURES	2.4946	10.1	39
287	10	SURG	SKIN GRAFTS & WOUND DEBRID FOR ENDOC, NUTRIT & METAB DISORDERS	2.2311	13.6	43
288	10	SURG	O.R. PROCEDURES FOR OBESITY	1.9691	7.4	36
289	10	SURG	PARATHYROID PROCEDURES	.9954	4.3	33
290	10	SURG	THYROID PROCEDURES	.7394	3.0	18
291	10	SURG	THYROGLOSSAL PROCEDURES	.4882	1.8	10
292	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC WITH CC	2.8203	12.1	41
293	10	SURG	OTHER ENDOCRINE, NUTRIT & METAB O.R. PROC W/O CC	1.0686	5.6	35
294	10	MED	DIABETES AGE >35	.7533	5.9	35
295	10	MED	DIABETES AGE 0-35	.7433	4.4	33
296	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 WITH CC	.9387	6.1	35
297	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE >17 W/O CC	.5361	4.1	32
298	10	MED	NUTRITIONAL & MISC METABOLIC DISORDERS AGE 0-17	.5694	3.2	32
299	10	MED	INBORN ERRORS OF METABOLISM	.8009	4.6	34
300	10	MED	ENDOCRINE DISORDERS WITH CC	1.1216	7.1	36
301	10	MED	ENDOCRINE DISORDERS W/O CC	.6187	4.3	33
302	11	SURG	KIDNEY TRANSPLANT	3.9581	14.6	44
303	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROCEDURES FOR NEOPLASM	2.6416	11.9	41
304	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROC FOR NON-NEOPL WITH CC	2.4192	10.3	39
305	11	SURG	KIDNEY,URETER & MAJOR BLADDER PROC FOR NON-NEOPL W/O CC	1.2168	5.5	34
306	11	SURG	PROSTATECTOMY WITH CC	1.3240	7.2	36
307	11	SURG	PROSTATECTOMY W/O CC	.7334	4.2	24
308	11	SURG	MINOR BLADDER PROCEDURES WITH CC	1.4736	6.5	36
309	11	SURG	MINOR BLADDER PROCEDURES W/O CC	.7815	3.3	32
310	11	SURG	TRANSURETHRAL PROCEDURES WITH CC	.8741	4.1	33
311	11	SURG	TRANSURETHRAL PROCEDURES W/O CC	.5178	2.4	17
312	11	SURG	URETHRAL PROCEDURES, AGE >17 WITH CC	.7898	3.8	33
313	11	SURG	URETHRAL PROCEDURES, AGE >17 W/O CC	.4769	2.3	20
314	11	SURG	URETHRAL PROCEDURES, AGE 0-17	.4271	2.3	26
315	11	SURG	OTHER KIDNEY & URINARY TRACT O.R. PROCEDURES	2.1922	7.5	36

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
316	11	MED	RENAL FAILURE	1.2684	6.4	35
317	11	MED	ADMIT FOR RENAL DIALYSIS	.3499	2.2	21
318	11	MED	KIDNEY & URINARY TRACT NEOPLASMS WITH CC	1.0885	6.1	35
319	11	MED	KIDNEY & URINARY TRACT NEOPLASMS W/O CC	.5586	2.7	32
320	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 WITH CC	1.0055	6.7	36
321	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE >17 W/O CC	.6507	5.0	29
322	11	MED	KIDNEY & URINARY TRACT INFECTIONS AGE 0-17	.6387	4.4	29
323	11	MED	URINARY STONES WITH CC, &/OR ESW LITHOTRIPSY	.7510	2.9	32
324	11	MED	URINARY STONES W/O CC	.3932	2.2	15
325	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 WITH CC	.6666	4.4	33
326	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE >17 W/O CC	.4286	3.0	25
327	11	MED	KIDNEY & URINARY TRACT SIGNS & SYMPTOMS AGE 0-17	.5444	3.1	32
328	11	MED	URETHRAL STRICTURE AGE >17 WITH CC	.6346	3.8	33
329	11	MED	URETHRAL STRICTURE AGE >17 W/O CC	.4168	2.3	18
330	11	MED	URETHRAL STRICTURE AGE 0-17	.2754	1.6	9
331	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 WITH CC	.9493	5.3	34
332	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE >17 W/O CC	.5447	3.2	32
333	11	MED	OTHER KIDNEY & URINARY TRACT DIAGNOSES AGE 0-17	1.0415	5.1	34
334	12	SURG	MAJOR MALE PELVIC PROCEDURES W CC	1.7911	9.4	36
335	12	SURG	MAJOR MALE PELVIC PROCEDURES W/O CC	1.3375	7.9	23
336	12	SURG	TRANSURETHRAL PROSTATECTOMY WITH CC	.9326	5.3	28
337	12	SURG	TRANSURETHRAL PROSTATECTOMY W/O CC	.6329	3.9	13
338	12	SURG	TESTES PROCEDURES, FOR MALIGNANCY	.7662	3.0	32
339	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE >17	.5880	2.4	29
340	12	SURG	TESTES PROCEDURES, NON-MALIGNANCY AGE 0-17	.4283	2.4	13
341	12	SURG	PENIS PROCEDURES	.9850	3.5	28
342	12	SURG	CIRCUMCISION AGE >17	.4971	2.3	24
343	12	SURG	CIRCUMCISION AGE 0-17	.3742	1.7	6
344	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	1.0811	4.8	34
345	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIGNANCY	.7450	3.8	33
346	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, WITH CC	.9561	5.8	35
347	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, W/O CC	.4852	2.5	32
348	12	MED	BENIGN PROSTATIC HYPERTROPHY WITH CC	.6835	3.9	33
349	12	MED	BENIGN PROSTATIC HYPERTROPHY W/O CC	.3847	2.2	20
350	12	MED	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	.6657	4.9	29

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
351	12	MED	STERILIZATION, MALE	.3293	1.3	5
352	12	MED	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	.5158	3.0	30
353	13	SURG	PELVIC EVISCERATION, RADICAL HYSTERECTOMY & RADICAL VULVECTOMY	2.1148	10.9	40
354	13	SURG	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG WITH CC	1.3937	7.6	35
355	13	SURG	UTERINE,ADNEXA PROC FOR NON-OVARIAN/ADNEXAL MALIG W/O CC	.8676	5.4	15
356	13	SURG	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	.7139	4.4	18
357	13	SURG	UTERINE & ADNEXA PROC FOR OVARIAN OR ADNEXAL MALIG	2.2286	10.6	40
358	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY WITH CC	1.1515	6.5	26
359	13	SURG	UTERINE & ADNEXA PROC FOR NON-MALIGNANCY W/O CC	.7887	4.9	13
360	13	SURG	VAGINA, CERVIX & VULVA PROCEDURES	.7643	4.2	33
361	13	SURG	LAPAROSCOPY & INCISIONAL TUBAL INTERRUPTION	.8125	3.2	32
362	13	SURG	ENDOSCOPIC TUBAL INTERRUPTION	.4921	2.1	23
363	13	SURG	D&C, CONIZATION & RADIO-IMPLANT, FOR MALIGNANCY	.6421	3.3	30
364	13	SURG	D&C, CONIZATION EXCEPT FOR MALIGNANCY	.4876	2.4	24
365	13	SURG	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.7521	7.9	37
366	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM WITH CC	1.1937	6.6	36
367	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM W/O CC	.4791	2.8	32
368	13	MED	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	.8639	6.0	35
369	13	MED	MENSTRUAL & OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	.5198	3.3	32
370	14	SURG	CESAREAN SECTION W CC	.9284	6.0	33
371	14	SURG	CESAREAN SECTION W/O CC	.6277	4.3	11
372	14	MED	VAGINAL DELIVERY W COMPLICATING DIAGNOSES	.4541	3.0	19
373	14	MED	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	.2963	2.1	8
374	14	SURG	VAGINAL DELIVERY W STERILIZATION &/OR D&C	.5204	2.8	12
375	14	SURG	VAGINAL DELIVERY W O.R. PROC EXCEPT STERIL &/OR D&C	.6735	4.4	29
376	14	MED	POSTPARTUM & POST ABORTION DIAGNOSES W/O O.R. PROCEDURE	.3646	2.6	22
377	14	SURG	POSTPARTUM & POST ABORTION DIAGNOSES W O.R. PROCEDURE	.6757	3.0	32
378	14	MED	ECTOPIC PREGNANCY	.6686	3.6	16
379	14	MED	THREATENED ABORTION	.2651	2.1	18
380	14	MED	ABORTION W/O D&C	.2943	1.9	12
381	14	SURG	ABORTION W D&C, ASPIRATION CURETTAGE OR HYSTEROTOMY	.3727	1.5	10
382	14	MED	FALSE LABOR	.1101	1.1	3
383	14	MED	OTHER ANTEPARTUM DIAGNOSES W MEDICAL COMPLICATIONS	.3854	3.4	32
384	14	MED	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	.2833	2.3	27
385	15		NEONATES, DIED OR TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.2084	1.8	31

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
386	15		EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	3.6039	17.9	47
387	15		PREMATURITY W MAJOR PROBLEMS	1.8046	13.3	42
388	15		PREMATURITY W/O MAJOR PROBLEMS	1.1431	8.6	38
389	15		FULL TERM NEONATE W MAJOR PROBLEMS	1.4266	5.3	34
390	15		NEONATE W OTHER SIGNIFICANT PROBLEMS	1.0001	4.5	34
391	15		NORMAL NEWBORN	.2191	3.1	11
392	16	SURG	SPLENECTOMY AGE >17	3.2611	12.1	41
393	16	SURG	SPLENECTOMY AGE 0-17	1.5022	9.1	38
394	16	SURG	OTHER O.R. PROCEDURES OF THE BLOOD AND BLOOD FORMING ORGANS	1.5388	5.7	35
395	16	MED	RED BLOOD CELL DISORDERS AGE >17	.7471	4.6	34
396	16	MED	RED BLOOD CELL DISORDERS AGE 0-17	.3615	2.1	23
397	16	MED	COAGULATION DISORDERS	1.1577	5.5	35
398	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS WITH CC	1.1795	6.5	35
399	16	MED	RETICULOENDOTHELIAL & IMMUNITY DISORDERS W/O CC	.6576	3.9	33
400	17	SURG	LYMPHOMA & LEUKEMIA W MAJOR O.R. PROCEDURE	2.7073	10.1	39
401	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W CC	2.2071	10.2	39
402	17	SURG	LYMPHOMA & NON-ACUTE LEUKEMIA W OTHER O.R. PROC W/O CC	.8877	3.9	33
403	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W CC	1.6019	8.2	37
404	17	MED	LYMPHOMA & NON-ACUTE LEUKEMIA W/O CC	.7474	4.3	33
405	17		ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE 0-17	1.0281	4.9	34
406	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R.PROC W CC	2.6994	11.4	40
407	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R.PROC W/O CC	1.2438	6.0	35
408	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W OTHER O.R.PROC	1.0511	4.2	33
409	17	MED	RADIOTHERAPY	1.0213	6.7	36
410	17	MED	CHEMOTHERAPY	.5123	2.7	19
411	17	MED	HISTORY OF MALIGNANCY W/O ENDOSCOPY	.4320	2.5	28
412	17	MED	HISTORY OF MALIGNANCY W ENDOSCOPY	.4072	2.2	21
413	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG WITH CC	1.3073	7.4	36
414	17	MED	OTHER MYELOPROLIF DIS OR POORLY DIFF NEOPL DIAG W/O CC	.7062	4.4	33
415	18	SURG	O.R. PROCEDURE FOR INFECTIOUS & PARASITIC DISEASES	3.5957	15.0	44
416	18	MED	SEPTECEMIA AGE >17	1.5320	7.5	37
417	18	MED	SEPTECEMIA AGE 0-17	1.0768	5.3	34
418	18	MED	POSTOPERATIVE & POST-TRAUMATIC INFECTIONS	.9816	6.7	36
419	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 WITH CC	.9515	5.9	35
420	18	MED	FEVER OF UNKNOWN ORIGIN AGE >17 W/O CC	.6612	4.5	31

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
421	18	MED	VIRAL ILLNESS AGE >17	.6517	4.3	32
422	18	MED	VIRAL ILLNESS & FEVER OF UNKNOWN ORIGIN AGE 0-17	.7604	3.7	33
423	18	MED	OTHER INFECTIOUS & PARASITIC DISEASES DIAGNOSES	1.5928	8.0	37
424	19	SURG	O.R. PROCEDURE W PRINCIPAL DIAGNOSES OF MENTAL ILLNESS	2.3652	13.3	42
425	19	MED	ACUTE ADJUST REACT & DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	.6890	4.6	34
426	19	MED	DEPRESSIVE NEUROSES	.6290	5.7	35
427	19	MED	NEUROSES EXCEPT DEPRESSIVE	.6428	5.6	35
428	19	MED	DISORDERS OF PERSONALITY & IMPULSE CONTROL	.7065	6.4	35
429	19	MED	ORGANIC DISTURBANCES & MENTAL RETARDATION	.9216	7.6	37
430	19	MED	PSYCHOSES	.9026	8.9	38
431	19	MED	CHILDHOOD MENTAL DISORDERS	.6422	5.4	34
432	19	MED	OTHER MENTAL DISORDER DIAGNOSES	.7405	4.3	33
433	20		ALCOHOL/DRUG ABUSE OR DEPENDENCE, LEFT AMA	.3829	3.1	32
434	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT WITH CC	.8830	7.0	36
435	20		ALC/DRUG ABUSE OR DEPENDENCE, DETOX OR OTHER SYMPT TRT W/O CC	.7177	7.0	36
436	20		ALC/DRUG DEPENDENCE W REHABILITATION THERAPY	.9873	8.1	37
437	20		ALC/DRUG DEPENDENCE, COMBINED REHAB & DETOX THERAPY	1.2005	3.5	33
438	20		NO LONGER VALID	.0000	.0	0
439	21	SURG	SKIN GRAFTS FOR INJURIES	1.6689	7.2	36
440	21	SURG	WOUND DEBRIDEMENTS FOR INJURIES	2.5374	10.6	40
441	21	SURG	HAND PROCEDURES FOR INJURIES	.7189	2.6	32
442	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES WITH CC	1.8473	5.6	35
443	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES W/O CC	1.1467	4.0	33
444		MED	TRAUMATIC INJURY AGE > 17 W CC	.7621	5.1	34
445		MED	TRAUMATIC INJURY AGE > 17 W/O CC	.4906	3.6	32
446		MED	TRAUMATIC INJURY AGE 0-17	.4738	2.4	22
447	21	MED	ALLERGIC REACTIONS AGE >17	.4822	2.6	24
448	21	MED	ALLERGIC REACTIONS AGE 0-17	.3428	2.9	17
449	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 WITH CC	.7904	4.3	33
450	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE >17 W/O CC	.4485	2.6	25
451	21	MED	POISONING & TOXIC EFFECTS OF DRUGS AGE 0-17	.5126	3.8	33
452	21	MED	COMPLICATIONS OF TREATMENT WITH CC	.9317	4.7	34
453	21	MED	COMPLICATIONS OF TREATMENT W/O CC	.4775	3.1	32
454	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG WITH CC	.9488	4.5	34
455	21	MED	OTHER INJURY, POISONING & TOXIC EFF DIAG W/O CC	.4282	2.5	25

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				RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
456	22		BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.5138	4.1	33
457	22	MED	EXTENSIVE BURNS W/O O.R. PROCEDURE	2.1317	2.9	32
458	22	SURG	NON-EXTENSIVE BURNS W SKIN GRAFT	3.7539	15.8	45
459	22	SURG	NON-EXTENSIVE BURNS W WOUND DEBRIDEMENT OR OTHER O.R. PROC	2.0711	10.9	40
460	22	MED	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.0607	6.4	35
461	23	SURG	O.R. PROC W DIAGNOSES OF OTHER CONTACT W HEALTH SERVICES	.7771	2.4	31
462	23	MED	REHABILITATION	1.8435	14.1	43
463	23	MED	SIGNS & SYMPTOMS W CC	.7462	5.1	34
464	23	MED	SIGNS & SYMPTOMS W/O CC	.4700	3.2	31
465	23	MED	AFTERCARE W HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	.3995	1.9	21
466	23	MED	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DIAGNOSIS	.5749	2.6	32
467	23	MED	OTHER FACTORS INFLUENCING HEALTH STATUS	.4226	2.5	31
468			EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	3.4146	13.4	42
469		**	PRINCIPAL DIAGNOSIS INVALID AS DISCHARGE DIAGNOSIS	.0000	.0	0
470		**	UNGROUPABLE	.0000	.0	0
471	08	SURG	BILATERAL OR MULTIPLE MAJOR JOINT PROCS OF LOWER EXTREMITY	3.9492	14.2	43
472	22	SURG	EXTENSIVE BURNS W O.R. PROCEDURE	11.7637	21.0	50
473	17		ACUTE LEUKEMIA W/O MAJOR O.R. PROCEDURE AGE >17	3.2953	9.9	39
474	04		NO LONGER VALID	0.0000	.0	0
475	04	MED	RESPIRATORY SYSTEM DIAGNOSIS WITH VENTILATOR SUPPORT	3.5492	9.7	39
476			PROSTATIC O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	2.1816	14.4	43
477			NON-EXTENSIVE O.R. PROCEDURE UNRELATED TO PRINCIPAL DIAGNOSIS	1.4395	6.2	35
478	05	SURG	OTHER VASCULAR PROCEDURES W CC	2.4189	9.1	38
479	05	SURG	OTHER VASCULAR PROCEDURES W/O CC	1.3208	4.6	34
480		SURG	LIVER TRANSPLANT	15.2645	22.8	52
481		SURG	BONE MARROW TRANSPLANT	12.4485	36.6	66
482		SURG	TRACHEOSTOMY W MOUTH, LARYNX OR PHARYNX DISORDER	3.2660	14.2	43
483		SURG	TRACHEOSTOMY EXCEPT FOR MOUTH, LARYNX OR PHARYNX DISORDER	14.0597	40.0	69
484	24	SURG	CRANIOTOMY FOR MULTIPLE SIGNIFICANT TRAUMA	6.9972	13.5	43
485	24	SURG	LIMB REATTACH., HIP AND FEMUR PROCS FOR MULTI SIGN TRAUMA	3.2621	14.6	44
486	24	SURG	OTHER O.R. PROCEDURES FOR MULTIPLE SIGNIFICANT TRAUMA	4.9603	12.5	41
487	24	MED	OTHER MULTIPLE SIGNIFICANT TRAUMA	1.8324	7.6	37
488	25	SURG	HIV W EXTENSIVE O.R. PROCEDURE	4.1296	18.8	48
489	25	MED	HIV W MAJOR RELATED CONDITION	2.0674	10.2	39
490	25	MED	HIV W OR W/O OTHER RELATED CONDITION	1.1808	5.9	35

* MEDICARE DATA HAVE BEEN SUPPLEMENTED BY DATA FROM MARYLAND AND MICHIGAN FOR LOW VOLUME DRGS.
** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.
NOTE: GEOMETRIC MEAN IS USED ONLY TO DETERMINE PAYMENT FOR OUTLIER AND TRANSFER CASES.
NOTE: RELATIVE WEIGHTS ARE BASED ON MEDICARE PATIENT DATA AND MAY NOT BE APPROPRIATE FOR OTHER PATIENTS.

BILLING CODE 4120-01-C

TABLE 6a.—NEW DIAGNOSIS CODE

Diagnosis code and description	MDC	DRG	CC
237.70 Neurofibromatosis, unspecified	1	34, 35	N
237.71 Neurofibromatosis, Type 1 [von Recklinghausen's disease]	1	34, 35	N
237.72 Neurofibromatosis, Type 2 [acoustic neurofibromatosis]	1	34, 35	N
374.87 Dermatochalasis	2	46, 47, 48	N
446.20 Hypersensitivity angiitis, unspecified	8	240, 241	Y
446.21 Goodpasture's syndrome	8	240, 241	Y
446.29 Other specified hypersensitivity angiitis	8	240, 241	Y
537.82 Angiodysplasia of stomach and duodenum	6	182, 183, 184	N
569.84 Angiodysplasia	6	188, 189, 190	N
753.10 Cystic kidney disease, unspecified	11	331, 332, 333	N
753.11 Congenital single renal cyst	11	331, 332, 333	N
753.12 Polycystic kidney, unspecified type	11	331, 332, 333	N
753.13 Polycystic kidney, autosomal dominant	11	331, 332, 333	N
753.14 Polycystic kidney, autosomal recessive	11	331, 332, 333	N
753.15 Renal dysplasia	11	331, 332, 333	N
753.16 Medullary cystic kidney	11	331, 332, 333	N
753.17 Medullary sponge kidney	11	331, 332, 333	N
753.19 Other specified cystic kidney disease	11	331, 332, 333	N
996.85 Complications of bone marrow transplant	16	398, 399	Y

TABLE 6b.—New Procedure Codes

Procedure code and description	OR	MDC	DRG
33.6 Combined heart-lung transplantation [1]	Y	5	103
39.66 Percutaneous cardiopulmonary bypass	N		
58.31 Endoscopic excision or destruction of lesion or tissue of urethra	N		
58.39 Other local excision or destruction of lesion or tissue of urethra	N		
86.07 Insertion of totally implantable vascular access device [VAD]	N	9	269, 270

[1] This procedure code is not currently covered under Medicare. MDC and DRG assignment would change if the procedure is eventually covered for diagnoses outside MDC 5.

TABLE 6c—INVALID DIAGNOSIS CODES (4 DIGIT) [1]

Diagnosis code and description	MDC	DRG	CC
237.7 Neurofibromatosis	1	34, 35	N
446.2 Hypersensitivity angiitis	8	240, 241	Y
753.1 Cystic kidney disease	11	331, 332, 333	N

[1] See Table 6a for New Diagnosis Codes (5 digits) that will be considered valid by the 1991 GROUPER.

TABLE 6d.—Invalid Procedure Code [1]

Procedure code and description	OR
58.3 Excision or destruction of urethral tissue or lesion.	N

[1] See Table 6b for New Procedure Codes (4 digit) that will be considered valid by the FY 1991 GROUPER.

BILLING CODE 4120-01-M

Table 6e -- Additions to the CC Exclusions List

CCs that are added to the list are in Table 6e--Additions to the CC Exclusions List. Each of the principal diagnoses is shown with an asterisk, and the revisions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis.

*00321	*0721	11282	44621	53431	01304	4467	53171
3570	3570	11283	44629	53440	01305	*44621	53191
*01300	*09042	*11282	*2515	53441	01306	4460	53200
3570	3570	1120	4560	53450	01310	44620	53201
*01301	*09181	1124	5307	53451	01311	44621	53210
3570	3570	1125	53100	53460	01312	44629	53211
*01302	*0942	11281	53101	53461	01313	4463	53220
3570	3570	11283	53110	53471	01314	4464	53221
*01303	*09889	*11283	53111	53491	01315	4465	53231
3570	3570	1120	53120	5693	01316	4466	53240
*01304	*10081	1124	53121	5780	0360	4467	53241
3570	3570	1125	53131	5781	0530	*44629	53250
*01305	*1120	11281	53140	5789	05472	4460	53251
3570	1120	11282	53141	*3200	0721	44620	53260
*01306	1124	3570	53150	3570	09042	44621	53261
3570	1125	*11289	53151	*3201	0942	44629	53271
*01310	11281	1120	53160	3570	11283	4463	53291
3570	11282	*1129	53161	*3202	1142	4464	53300
*01311	11283	1120	53171	3570	11501	4465	53301
3570	*1121	*1142	53191	*3203	11511	4466	53310
*01312	1120	3570	53200	3570	11591	4467	53311
3570	1124	*11501	53201	*3207	3200	*4463	53320
*01313	1125	3570	53210	3570	3201	44620	53321
3570	11281	*11511	53211	*3208	3202	44621	53331
*01314	11282	3570	53220	3570	3203	44629	53340
3570	11283	*11591	53221	*3209	3207	*4464	53341
*01315	*1122	3570	53231	3570	3208	44620	53350
3570	1120	*1179	53240	*3210	3209	44621	53351
*01316	1124	1120	53241	3570	3210	44629	53360
3570	1125	*1300	53250	*3211	3211	*4465	53361
*0360	11281	3570	53251	3570	3212	44620	53371
3570	11282	*1398	53260	*3212	3213	44621	53391
*03689	11283	1120	53261	3570	3214	44629	53400
3570	*1123	3570	53271	*3213	3218	*4466	53401
*0369	1120	*25070	53291	3570	3220	44620	53410
3570	1124	44620	53300	*3214	3221	44621	53411
*0418	1125	44621	53301	3570	3222	44629	53420
3570	11281	44629	53310	*3218	3229	*4467	53421
*0419	11282	*25071	53311	3570	3570	44620	53431
3570	11283	44620	53320	*3220	*4460	44621	53440
*0470	*1124	44621	53321	3570	44620	44629	53441
3570	1120	44629	53331	*3221	44621	*4560	53450
*0471	1125	*25080	53340	3570	44629	5307	53451
3570	11281	44620	53341	*3222	*4461	53100	53460
*0478	11282	44621	53350	3570	44620	53101	53461
3570	11283	44629	53351	*3229	44621	53110	53471
*0479	*1125	*25081	53360	3570	44629	53111	53491
3570	1120	44620	53361	*34989	*44620	53120	5693
*0490	1124	44621	53371	3570	4460	53121	5780
3570	11281	44629	53391	*3499	44620	53131	5781
*0491	11282	*25090	53400	3570	44621	53140	5789
3570	11283	44620	53401	*3570	44629	53141	*45989
*0530	*11281	44621	53410	01300	4463	53150	44620
3570	1120	44629	53411	01301	4464	53151	44621
*05472	1124	*25091	53420	01302	4465	53160	44629
3570	1125	44620	53421	01303	4466	53161	*4599

44620	53421	53351	53391	53411	53440	53460	5693
44621	53431	53360	53400	53420	53441	53461	5780
44629	53440	53361	53401	53421	53450	53471	5781
*5302	53441	53371	53410	53431	53451	53491	5789
4560	53450	53391	53411	53440	53460	5693	*53121
5307	53451	53400	53420	53441	53461	5780	4560
53100	53460	53401	53421	53450	53471	5781	5307
53101	53461	53410	53431	53451	53491	5789	53200
53110	53471	53411	53440	53460	5693	*53120	53201
53111	53491	53420	53441	53461	5780	4560	53210
53120	5693	53421	53450	53471	5781	5307	53211
53121	5780	53431	53451	53491	5789	53200	53220
53131	5781	53440	53460	5693	*53111	53201	53221
53140	5789	53441	53461	5780	4560	53210	53231
53141	*5307	53450	53471	5781	5307	53211	53240
53150	4560	53451	53491	5789	53200	53220	53241
53151	53100	53460	5693	*53110	53201	53221	53250
53160	53101	53461	5780	4560	53210	53231	53251
53161	53110	53471	5781	5307	53211	53240	53260
53171	53111	53491	5789	53200	53220	53241	53261
53191	53120	5693	*53101	53201	53221	53250	53271
53200	53121	5780	4560	53210	53231	53251	53291
53201	53131	5781	5307	53211	53240	53260	53300
53210	53140	5789	53200	53220	53241	53261	53301
53211	53141	*53100	53201	53221	53250	53271	53310
53220	53150	4560	53210	53231	53251	53291	53311
53221	53151	5307	53211	53240	53260	53300	53320
53231	53160	53200	53220	53241	53261	53301	53321
53240	53161	53201	53221	53250	53271	53310	53331
53241	53171	53210	53231	53251	53291	53311	53340
53250	53191	53211	53240	53260	53300	53320	53341
53251	53200	53220	53241	53261	53301	53321	53350
53260	53201	53221	53250	53271	53310	53331	53351
53261	53210	53231	53251	53291	53311	53340	53360
53271	53211	53240	53260	53300	53320	53341	53361
53291	53220	53241	53261	53301	53321	53350	53371
53300	53221	53250	53271	53310	53331	53351	53391
53301	53231	53251	53291	53311	53340	53360	53400
53310	53240	53260	53300	53320	53341	53361	53401
53311	53241	53261	53301	53321	53350	53371	53410
53320	53250	53271	53310	53331	53351	53391	53411
53321	53251	53291	53311	53340	53360	53400	53420
53331	53260	53300	53320	53341	53361	53401	53421
53340	53261	53301	53321	53350	53371	53410	53431
53341	53271	53310	53331	53351	53391	53411	53440
53350	53291	53311	53340	53360	53400	53420	53441
53351	53300	53320	53341	53361	53401	53421	53450
53360	53301	53321	53350	53371	53410	53431	53451
53361	53310	53331	53351	53391	53411	53440	53460
53371	53311	53340	53360	53400	53420	53441	53461
53391	53320	53341	53361	53401	53421	53450	53471
53400	53321	53350	53371	53410	53431	53451	53491
53401	53331	53351	53391	53411	53440	53460	5693
53410	53340	53360	53400	53420	53441	53461	5780
53411	53341	53361	53401	53421	53450	53471	5781
53420	53350	53371	53410	53431	53451	53491	5789

*53130	53201	53221	53250	53271	53310	53331	53351
4560	53210	53231	53251	53291	53311	53340	53360
5307	53211	53240	53260	53300	53320	53341	53361
53200	53220	53241	53261	53301	53321	53350	53371
53201	53221	53250	53271	53310	53331	53351	53391
53210	53231	53251	53291	53311	53340	53360	53400
53211	53240	53260	53300	53320	53341	53361	53401
53220	53241	53261	53301	53321	53350	53371	53410
53221	53250	53271	53310	53331	53351	53391	53411
53231	53251	53291	53311	53340	53360	53400	53420
53240	53260	53300	53320	53341	53361	53401	53421
53241	53261	53301	53321	53350	53371	53410	53431
53250	53271	53310	53331	53351	53391	53411	53440
53251	53291	53311	53340	53360	53400	53420	53441
53260	53300	53320	53341	53361	53401	53421	53450
53261	53301	53321	53350	53371	53410	53431	53451
53271	53310	53331	53351	53391	53411	53440	53460
53291	53311	53340	53360	53400	53420	53441	53461
53300	53320	53341	53361	53401	53421	53450	53471
53301	53321	53350	53371	53410	53431	53451	53491
53310	53331	53351	53391	53411	53440	53460	5693
53311	53340	53360	53400	53420	53441	53461	5780
53320	53341	53361	53401	53421	53450	53471	5781
53321	53350	53371	53410	53431	53451	53491	5789
53331	53351	53391	53411	53440	53460	5693	*53170
53340	53360	53400	53420	53441	53461	5780	4560
53341	53361	53401	53421	53450	53471	5781	5307
53350	53371	53410	53431	53451	53491	5789	53200
53351	53391	53411	53440	53460	5693	*53161	53201
53360	53400	53420	53441	53461	5780	4560	53210
53361	53401	53421	53450	53471	5781	5307	53211
53371	53410	53431	53451	53491	5789	53200	53220
53391	53411	53440	53460	5693	*53160	53201	53221
53400	53420	53441	53461	5780	4560	53210	53231
53401	53421	53450	53471	5781	5307	53211	53240
53410	53431	53451	53491	5789	53200	53220	53241
53411	53440	53460	5693	*53151	53201	53221	53250
53420	53441	53461	5780	4560	53210	53231	53251
53421	53450	53471	5781	5307	53211	53240	53260
53431	53451	53491	5789	53200	53220	53241	53261
53440	53460	5693	*53150	53201	53221	53250	53271
53441	53461	5780	4560	53210	53231	53251	53291
53450	53471	5781	5307	53211	53240	53260	53300
53451	53491	5789	53200	53220	53241	53261	53301
53460	5693	*53141	53201	53221	53250	53271	53310
53461	5780	4560	53210	53231	53251	53291	53311
53471	5781	5307	53211	53240	53260	53300	53320
53491	5789	53200	53220	53241	53261	53301	53321
5693	*53140	53201	53221	53250	53271	53310	53331
5780	4560	53210	53231	53251	53291	53311	53340
5781	5307	53211	53240	53260	53300	53320	53341
5789	53200	53220	53241	53261	53301	53321	53350
*53131	53201	53221	53250	53271	53310	53331	53351
4560	53210	53231	53251	53291	53311	53340	53360
5307	53211	53240	53260	53300	53320	53341	53361
53200	53220	53241	53261	53301	53321	53350	53371

53391	53411	53440	53460	5693	*53210	53101	53121
53400	53420	53441	53461	5780	4560	53110	53131
53401	53421	53450	53471	5781	5307	53111	53140
53410	53431	53451	53491	5789	53100	53120	53141
53411	53440	53460	5693	*53201	53101	53121	53150
53420	53441	53461	5780	4560	53110	53131	53151
53421	53450	53471	5781	5307	53111	53140	53160
53431	53451	53491	5789	53100	53120	53141	53161
53440	53460	5693	*53200	53101	53121	53150	53171
53441	53461	5780	4560	53110	53131	53151	53191
53450	53471	5781	5307	53111	53140	53160	53300
53451	53491	5789	53100	53120	53141	53161	53301
53460	5693	*53191	53101	53121	53150	53171	53310
53461	5780	4560	53110	53131	53151	53191	53311
53471	5781	5307	53111	53140	53160	53300	53320
53491	5789	53200	53120	53141	53161	53301	53321
5693	*53190	53201	53121	53150	53171	53310	53331
5780	4560	53210	53131	53151	53191	53311	53340
5781	5307	53211	53140	53160	53300	53320	53341
5789	53200	53220	53141	53161	53301	53321	53350
*53171	53201	53221	53150	53171	53310	53331	53351
4560	53210	53231	53151	53191	53311	53340	53360
5307	53211	53240	53160	53300	53320	53341	53361
53200	53220	53241	53161	53301	53321	53350	53371
53201	53221	53250	53171	53310	53331	53351	53391
53210	53231	53251	53191	53311	53340	53360	53400
53211	53240	53260	53300	53320	53341	53361	53401
53220	53241	53261	53301	53321	53350	53371	53410
53221	53250	53271	53310	53331	53351	53391	53411
53231	53251	53291	53311	53340	53360	53400	53420
53240	53260	53300	53320	53341	53361	53401	53421
53241	53261	53301	53321	53350	53371	53410	53431
53250	53271	53310	53331	53351	53391	53411	53440
53251	53291	53311	53340	53360	53400	53420	53441
53260	53300	53320	53341	53361	53401	53421	53450
53261	53301	53321	53350	53371	53410	53431	53451
53271	53310	53331	53351	53391	53411	53440	53460
53291	53311	53340	53360	53400	53420	53441	53461
53300	53320	53341	53361	53401	53421	53450	53471
53301	53321	53350	53371	53410	53431	53451	53491
53310	53331	53351	53391	53411	53440	53460	5693
53311	53340	53360	53400	53420	53441	53461	5780
53320	53341	53361	53401	53421	53450	53471	5781
53321	53350	53371	53410	53431	53451	53491	5789
53331	53351	53391	53411	53440	53460	5693	*53221
53340	53360	53400	53420	53441	53461	5780	4560
53341	53361	53401	53421	53450	53471	5781	5307
53350	53371	53410	53431	53451	53491	5789	53100
53351	53391	53411	53440	53460	5693	*53220	53101
53360	53400	53420	53441	53461	5780	4560	53110
53361	53401	53421	53450	53471	5781	5307	53111
53371	53410	53431	53451	53491	5789	53100	53120
53391	53411	53440	53460	5693	*53211	53101	53121
53400	53420	53441	53461	5780	4560	53110	53131
53401	53421	53450	53471	5781	5307	53111	53140
53410	53431	53451	53491	5789	53100	53120	53141

53150	53171	53310	53331	53351	53391	53411	53440
53151	53191	53311	53340	53360	53400	53420	53441
53160	53300	53320	53341	53361	53401	53421	53450
53161	53301	53321	53350	53371	53410	53431	53451
53171	53310	53331	53351	53391	53411	53440	53460
53191	53311	53340	53360	53400	53420	53441	53461
53300	53320	53341	53361	53401	53421	53450	53471
53301	53321	53350	53371	53410	53431	53451	53491
53310	53331	53351	53391	53411	53440	53460	5693
53311	53340	53360	53400	53420	53441	53461	5780
53320	53341	53361	53401	53421	53450	53471	5781
53321	53350	53371	53410	53431	53451	53491	5789
53331	53351	53391	53411	53440	53460	5693	*53261
53340	53360	53400	53420	53441	53461	5780	4560
53341	53361	53401	53421	53450	53471	5781	5307
53350	53371	53410	53431	53451	53491	5789	53100
53351	53391	53411	53440	53460	5693	*53260	53101
53360	53400	53420	53441	53461	5780	4560	53110
53361	53401	53421	53450	53471	5781	5307	53111
53371	53410	53431	53451	53491	5789	53100	53120
53391	53411	53440	53460	5693	*53251	53101	53121
53400	53420	53441	53461	5780	4560	53110	53131
53401	53421	53450	53471	5781	5307	53111	53140
53410	53431	53451	53491	5789	53100	53120	53141
53411	53440	53460	5693	*53250	53101	53121	53150
53420	53441	53461	5780	4560	53110	53131	53151
53421	53450	53471	5781	5307	53111	53140	53160
53431	53451	53491	5789	53100	53120	53141	53161
53440	53460	5693	*53241	53101	53121	53150	53171
53441	53461	5780	4560	53110	53131	53151	53191
53450	53471	5781	5307	53111	53140	53160	53300
53451	53491	5789	53100	53120	53141	53161	53301
53460	5693	*53240	53101	53121	53150	53171	53310
53461	5780	4560	53110	53131	53151	53191	53311
53471	5781	5307	53111	53140	53160	53300	53320
53491	5789	53100	53120	53141	53161	53301	53321
5693	*53231	53101	53121	53150	53171	53310	53331
5780	4560	53110	53131	53151	53191	53311	53340
5781	5307	53111	53140	53160	53300	53320	53341
5789	53100	53120	53141	53161	53301	53321	53350
*53230	53101	53121	53150	53171	53310	53331	53351
4560	53110	53131	53151	53191	53311	53340	53360
5307	53111	53140	53160	53300	53320	53341	53361
53100	53120	53141	53161	53301	53321	53350	53371
53101	53121	53150	53171	53310	53331	53351	53391
53110	53131	53151	53191	53311	53340	53360	53400
53111	53140	53160	53300	53320	53341	53361	53401
53120	53141	53161	53301	53321	53350	53371	53410
53121	53150	53171	53310	53331	53351	53391	53411
53131	53151	53191	53311	53340	53360	53400	53420
53140	53160	53300	53320	53341	53361	53401	53421
53141	53161	53301	53321	53350	53371	53410	53431
53150	53171	53310	53331	53351	53391	53411	53440
53151	53191	53311	53340	53360	53400	53420	53441
53160	53300	53320	53341	53361	53401	53421	53450
53161	53301	53321	53350	53371	53410	53431	53451

53460	5693	*53290	53101	53421	5781	53440	*53340
53461	5780	4560	53110	53431	5789	53441	4560
53471	5781	5307	53111	53440	*53311	53450	5307
53491	5789	53100	53120	53441	4560	53451	53400
5693	*53271	53101	53121	53450	5307	53460	53401
5780	4560	53110	53131	53451	53400	53461	53410
5781	5307	53111	53140	53460	53401	53471	53411
5789	53100	53120	53141	53461	53410	53491	53420
*53270	53101	53121	53150	53471	53411	5693	53421
4560	53110	53131	53151	53491	53420	5780	53431
5307	53111	53140	53160	5693	53421	5781	53440
53100	53120	53141	53161	5780	53431	5789	53441
53101	53121	53150	53171	5781	53440	*53330	53450
53110	53131	53151	53191	5789	53441	4560	53451
53111	53140	53160	53300	*53301	53450	5307	53460
53120	53141	53161	53301	4560	53451	53400	53461
53121	53150	53171	53310	5307	53460	53401	53471
53131	53151	53191	53311	53400	53461	53410	53491
53140	53160	53300	53320	53401	53471	53411	5693
53141	53161	53301	53321	53410	53491	53420	5780
53150	53171	53310	53331	53411	5693	53421	5781
53151	53191	53311	53340	53420	5780	53431	5789
53160	53300	53320	53341	53421	5781	53440	*53341
53161	53301	53321	53350	53431	5789	53441	4560
53171	53310	53331	53351	53440	*53320	53450	5307
53191	53311	53340	53360	53441	4560	53451	53400
53300	53320	53341	53361	53450	5307	53460	53401
53301	53321	53350	53371	53451	53400	53461	53410
53310	53331	53351	53391	53460	53401	53471	53411
53311	53340	53360	53400	53461	53410	53491	53420
53320	53341	53361	53401	53471	53411	5693	53421
53321	53350	53371	53410	53491	53420	5780	53431
53331	53351	53391	53411	5693	53421	5781	53440
53340	53360	53400	53420	5780	53431	5789	53441
53341	53361	53401	53421	5781	53440	*53331	53450
53350	53371	53410	53431	5789	53441	4560	53451
53351	53391	53411	53440	*53310	53450	5307	53460
53360	53400	53420	53441	4560	53451	53400	53461
53361	53401	53421	53450	5307	53460	53401	53471
53371	53410	53431	53451	53400	53461	53410	53491
53391	53411	53440	53460	53401	53471	53411	5693
53400	53420	53441	53461	53410	53491	53420	5780
53401	53421	53450	53471	53411	5693	53421	5781
53410	53431	53451	53491	53420	5780	53431	5789
53411	53440	53460	5693	53421	5781	53440	*53350
53420	53441	53461	5780	53431	5789	53441	4560
53421	53450	53471	5781	53440	*53321	53450	5307
53431	53451	53491	5789	53441	4560	53451	53400
53440	53460	5693	*53300	53450	5307	53460	53401
53441	53461	5780	4560	53451	53400	53461	53410
53450	53471	5781	5307	53460	53401	53471	53411
53451	53491	5789	53400	53461	53410	53491	53420
53460	5693	*53291	53401	53471	53411	5693	53421
53461	5780	4560	53410	53491	53420	5780	53431
53471	5781	5307	53411	5693	53421	5781	53440
53491	5789	53100	53420	5780	53431	5789	53441

53450	5307	53460	53101	53221	53110	53231	53111
53451	53400	53461	53110	53231	53111	53240	53120
53460	53401	53471	53111	53240	53120	53241	53121
53461	53410	53491	53120	53241	53121	53250	53131
53471	53411	5693	53121	53250	53131	53251	53140
53491	53420	5780	53131	53251	53140	53260	53141
5693	53421	5781	53140	53260	53141	53261	53150
5780	53431	5789	53141	53261	53150	53271	53151
5781	53440	*53390	53150	53271	53151	53291	53160
5789	53441	4560	53151	53291	53160	5693	53161
*53351	53450	5307	53160	5693	53161	5780	53171
4560	53451	53400	53161	5780	53171	5781	53191
5307	53460	53401	53171	5781	53191	5789	53200
53400	53461	53410	53191	5789	53200	*53421	53201
53401	53471	53411	53200	*53410	53201	4560	53210
53410	53491	53420	53201	4560	53210	5307	53211
53411	5693	53421	53210	5307	53211	53100	53220
53420	5780	53431	53211	53100	53220	53101	53221
53421	5781	53440	53220	53101	53221	53110	53231
53431	5789	53441	53221	53110	53231	53111	53240
53440	*53370	53450	53231	53111	53240	53120	53241
53441	4560	53451	53240	53120	53241	53121	53250
53450	5307	53460	53241	53121	53250	53131	53251
53451	53400	53461	53250	53131	53251	53140	53260
53460	53401	53471	53251	53140	53260	53141	53261
53461	53410	53491	53260	53141	53261	53150	53271
53471	53411	5693	53261	53150	53271	53151	53291
53491	53420	5780	53271	53151	53291	53160	5693
5693	53421	5781	53291	53160	5693	53161	5780
5780	53431	5789	5693	53161	5780	53171	5781
5781	53440	*53391	5780	53171	5781	53191	5789
5789	53441	4560	5781	53191	5789	53200	*53431
*53360	53450	5307	5789	53200	*53420	53201	4560
4560	53451	53400	*53401	53201	4560	53210	5307
5307	53460	53401	4560	53210	5307	53211	53100
53400	53461	53410	5307	53211	53100	53220	53101
53401	53471	53411	53100	53220	53101	53221	53110
53410	53491	53420	53101	53221	53110	53231	53111
53411	5693	53421	53110	53231	53111	53240	53120
53420	5780	53431	53111	53240	53120	53241	53121
53421	5781	53440	53120	53241	53121	53250	53131
53431	5789	53441	53121	53250	53131	53251	53140
53440	*53371	53450	53131	53251	53140	53260	53141
53441	4560	53451	53140	53260	53141	53261	53150
53450	5307	53460	53141	53261	53150	53271	53151
53451	53400	53461	53150	53271	53151	53291	53160
53460	53401	53471	53151	53291	53160	5693	53161
53461	53410	53491	53160	5693	53161	5780	53171
53471	53411	5693	53161	5780	53171	5781	53191
53491	53420	5780	53171	5781	53191	5789	53200
5693	53421	5781	53191	5789	53200	*53430	53201
5780	53431	5789	53200	*53411	53201	4560	53210
5781	53440	*53400	53201	4560	53210	5307	53211
5789	53441	4560	53210	5307	53211	53100	53220
*53361	53450	5307	53211	53100	53220	53101	53221
4560	53451	53100	53220	53101	53221	53110	53231

53240	53120	53241	53121	53250	53131	53251	53140
53241	53121	53250	53131	53251	53140	53260	53141
53250	53131	53251	53140	53260	53141	53261	53150
53251	53140	53260	53141	53261	53150	53271	53151
53260	53141	53261	53150	53271	53151	53291	53160
53261	53150	53271	53151	53291	53160	5693	53161
53271	53151	53291	53160	5693	53161	5780	53171
53291	53160	5693	53161	5780	53171	5781	53191
5693	53161	5780	53171	5781	53191	5789	53200
5780	53171	5781	53191	5789	53200	*53491	53201
5781	53191	5789	53200	*53470	53201	4560	53210
5789	53200	*53451	53201	4560	53210	5307	53211
*53440	53201	4560	53210	5307	53211	53100	53220
4560	53210	5307	53211	53100	53220	53101	53221
5307	53211	53100	53220	53101	53221	53110	53231
53100	53220	53101	53221	53110	53231	53111	53240
53101	53221	53110	53231	53111	53240	53120	53241
53110	53231	53111	53240	53120	53241	53121	53250
53111	53240	53120	53241	53121	53250	53131	53251
53120	53241	53121	53250	53131	53251	53140	53260
53121	53250	53131	53251	53140	53260	53141	53261
53131	53251	53140	53260	53141	53261	53150	53271
53140	53260	53141	53261	53150	53271	53151	53291
53141	53261	53150	53271	53151	53291	53160	53300
53150	53271	53151	53291	53160	5693	53161	53301
53151	53291	53160	5693	53161	5780	53171	53310
53160	5693	53161	5780	53171	5781	53191	53311
53161	5780	53171	5781	53191	5789	53200	53320
53171	5781	53191	5789	53200	*53490	53201	53321
53191	5789	53200	*53461	53201	4560	53210	53331
53200	*53450	53201	4560	53210	5307	53211	53340
53201	4560	53210	5307	53211	53100	53220	53341
53210	5307	53211	53100	53220	53101	53221	53350
53211	53100	53220	53101	53221	53110	53231	53351
53220	53101	53221	53110	53231	53111	53240	53360
53221	53110	53231	53111	53240	53120	53241	53361
53231	53111	53240	53120	53241	53121	53250	53371
53240	53120	53241	53121	53250	53131	53251	53391
53241	53121	53250	53131	53251	53140	53260	53400
53250	53131	53251	53140	53260	53141	53261	53401
53251	53140	53260	53141	53261	53150	53271	53410
53260	53141	53261	53150	53271	53151	53291	53411
53261	53150	53271	53151	53291	53160	5693	53420
53271	53151	53291	53160	5693	53161	5780	53421
53291	53160	5693	53161	5780	53171	5781	53431
5693	53161	5780	53171	5781	53191	5789	53440
5780	53171	5781	53191	5789	53200	*5693	53441
5781	53191	5789	53200	*53471	53201	4560	53450
5789	53200	*53460	53201	4560	53210	5307	53451
*53441	53201	4560	53210	5307	53211	53100	53460
4560	53210	5307	53211	53100	53220	53101	53461
5307	53211	53100	53220	53101	53221	53110	53471
53100	53220	53101	53221	53110	53231	53111	53491
53101	53221	53110	53231	53111	53240	53120	5780
53110	53231	53111	53240	53120	53241	53121	5781
53111	53240	53120	53241	53121	53250	53131	5789

*57440	53431	53371	53321	5996
57400	53440	53391	53331	7882
*5780	53441	53400	53340	*75314
4560	53450	53401	53341	5845
5307	53451	53410	53350	5846
53100	53460	53411	53351	5847
53101	53461	53420	53360	5849
53110	53471	53421	53361	585
53111	53491	53431	53371	5996
53120	5693	53440	53391	7882
53121	*5781	53441	53400	*75315
53131	4560	53450	53401	5845
53140	5307	53451	53410	5846
53141	53100	53460	53411	5847
53150	53101	53461	53420	5849
53151	53110	53471	53421	585
53160	53111	53491	53431	5996
53161	53120	5693	53440	7882
53171	53121	*5789	53441	*75316
53191	53131	4560	53450	5845
53200	53140	5307	53451	5846
53201	53141	53100	53460	5847
53210	53150	53101	53461	5849
53211	53151	53110	53471	585
53220	53160	53111	53491	5996
53221	53161	53120	5693	7882
53231	53171	53121	*75310	*75317
53240	53191	53131	5845	5845
53241	53200	53140	5846	5846
53250	53201	53141	5847	5847
53251	53210	53150	5849	5849
53260	53211	53151	585	585
53261	53220	53160	5996	5996
53271	53221	53161	7882	7882
53291	53231	53171	*75311	*75319
53300	53240	53191	5845	5845
53301	53241	53200	5846	5846
53310	53250	53201	5847	5847
53311	53251	53210	5849	5849
53320	53260	53211	585	585
53321	53261	53220	5996	5996
53331	53271	53221	7882	7882
53340	53291	53231	*75312	*99673
53341	53300	53240	5845	V451
53350	53301	53241	5846	*99685
53351	53310	53250	5847	99685
53360	53311	53251	5849	*9979
53361	53320	53260	585	99685
53371	53321	53261	5996	
53391	53331	53271	7882	
53400	53340	53291	*75313	
53401	53341	53300	5845	
53410	53350	53301	5846	
53411	53351	53310	5847	
53420	53360	53311	5849	
53421	53361	53320	585	

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Table 6f—Deletions to the CC Exclusions List

CCs that are deleted from the list are in Table 6f—Deletions to the CC Exclusions List. Each of the principal diagnoses is shown with an asterisk, and the revisions to the CC Exclusions List are provided in an indented column immediately following the affected principal diagnosis.

*01700	*25071	5756
6824	4462	5758
*01701	*25080	*5756
6824	3490	5756
*01702	4462	5758
6824	*25081	*5758
*01703	3490	5756
6824	4462	5758
*01704	*25090	*5759
6824		5756
	3490	
*01705	4462	5758
6824	*25091	*5768
*01706	3490	5756
6824	4462	5758
*01790	*3490	*5769
6824	3490	5756
*01791	*34989	5758
6824	3490	*6824
*01792	*3499	6824
6824	3490	*6828
*01793	*4460	6824
6824	4462	*6829
*01794	*4461	6824
6824	4462	*6860
*01795	*4462	6824
6824	4460	*6861
*01796	4462	6824
6824	4463	*6868
*04089	4464	6824
6824	4465	*6869
*0410	4466	6824
6824	4467	*70583
*0411	*4463	6824
6824	4462	*7098
*0412	*4464	6824
6824	4462	*7531
*0413	*4465	5845
6824	4462	5846
*0414	*4466	5847
6824	4462	5849
*0415	*4467	585
6824	4462	5996
*0416	*45989	7862
6824	4462	
*0417	*4599	
6824	4462	
*0418	*5752	
6824	5756	
*0419	5758	
6824	*5753	
*25060	5756	
3490	5758	
*25061	*5754	
3490	5756	
*25070	5758	
4462	*5755	

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477

Procedure code	Description
04.99	Other operations on cranial and peripheral nerves, NEC.
05.23	Lumbar sympathectomy.
06.02	Reopening of wound of thyroid field.
08.23	Excision of major lesion of eyelid, partial-thickness.
08.24	Excision of major lesion of eyelid, full-thickness.
08.31	Repair of blepharoptosis by frontalis muscle technique with suture.
08.32	Repair of blepharoptosis by frontalis muscle technique with fascial sling.
08.34	Repair of blepharoptosis by other levator muscle techniques.
08.35	Repair of blepharoptosis by tarsal technique.
08.37	Reduction of overcorrection of ptosis.
08.38	Correction of lid retraction.
08.41	Repair of entropion or ectropion by thermocauterization.
08.42	Repair of entropion or ectropion by suture technique.
08.43	Repair of entropion or ectropion with wedge resection.
08.44	Repair of entropion or ectropion with lid reconstruction.
08.51	Canthotomy.
08.61	Reconstruction of eyelid with skin flap or graft.
08.62	Reconstruction of eyelid with mucous membrane flap or graft.
08.63	Reconstruction of eyelid with hair follicle graft.
08.64	Reconstruction of eyelid with tarsoconjunctival flap.
08.69	Other reconstruction of eyelid with flaps or grafts.
08.71	Reconstruction of eyelid involving lid margin, partial-thickness.
08.72	Other reconstruction of eyelid, partial-thickness.
08.73	Reconstruction of eyelid involving lid margin, full-thickness.
09.0	Incision of lacrimal gland.
09.11	Biopsy of lacrimal gland.
09.12	Biopsy of lacrimal sac.
09.19	Other diagnostic procedures on lacrimal system.
09.22	Other partial dacryoadenectomy.
09.23	Total dacryoadenectomy.
09.3	Other operations on lacrimal gland.
09.41	Probing of lacrimal punctum.
09.42	Probing of lacrimal canaliculi.
09.43	Probing of nasolacrimal duct.
09.44	Intubation of nasolacrimal duct.
09.49	Other manipulation of lacrimal passage.
09.51	Incision of lacrimal punctum.
09.52	Incision of lacrimal canaliculi.
09.53	Incision of lacrimal sac.
09.59	Other incision of lacrimal passages.
09.6	Excision of lacrimal sac and passage.
09.71	Correction of everted punctum.
09.72	Other repair of punctum.
09.73	Repair of canaliculus.
09.81	Dacryocystorhinostomy [DCR].
09.82	Conjunctivocystorhinostomy.
09.83	Conjunctivocystorhinostomy with insertion of tube or stent.
09.91	Obliteration of lacrimal punctum.
09.99	Other operations on lacrimal system, NEC.
10.0	Removal of embedded foreign body from conjunctiva by incision.
10.1	Other incision of conjunctiva.
10.21	Biopsy of conjunctiva.

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477—Continued

Procedure code	Description
10.29	Other diagnostic procedures on conjunctiva.
10.31	Excision of lesion or tissue of conjunctiva.
10.32	Destruction of lesion of conjunctiva.
10.33	Other destructive procedures on conjunctiva.
10.41	Repair of symblepharon with free graft.
10.42	Reconstruction of conjunctival cul-de-sac with free graft.
10.43	Other reconstruction of conjunctival cul-de-sac.
10.44	Other free graft to conjunctiva.
10.49	Other conjunctivoplasty.
10.5	Lysis of adhesions of conjunctiva and eyelid.
10.91	Subconjunctival injection.
10.99	Other operations on conjunctiva, NEC.
11.0	Magnetic removal of embedded foreign body from cornea.
11.1	Incision of cornea.
11.21	Scraping of cornea for smear or culture.
11.22	Biopsy of cornea.
11.29	Other diagnostic procedures on cornea.
11.31	Transposition of pterygium.
11.32	Excision of pterygium with corneal graft.
11.39	Other excision of pterygium.
11.41	Mechanical removal of corneal epithelium.
11.42	Thermocauterization of corneal lesion.
11.43	Cryotherapy of corneal lesion.
11.49	Other removal or destruction of corneal lesion.
11.51	Suture of corneal laceration.
11.52	Repair of postoperative wound dehiscence of cornea.
11.53	Repair of corneal laceration or wound with conjunctival flap.
11.59	Other repair of cornea.
11.60	Corneal transplant, NOS.
11.61	Lamellar keratoplasty with autograft.
11.62	Other lamellar keratoplasty.
11.63	Penetrating keratoplasty with autograft.
11.64	Other penetrating keratoplasty.
11.69	Other corneal transplant.
11.71	Keratomeleusis.
11.72	Keratophakia.
11.73	Keratoprosthesis.
11.74	Thermokeratoplasty.
11.75	Radial Keratotomy.
11.76	Epikeratophakia.
11.79	Other reconstructive and refractive surgery on cornea, NEC.
11.91	Tattooing of cornea.
11.92	Removal of artificial implant from cornea.
11.99	Other operations on cornea, NEC.
12.00	Removal of intraocular foreign body from anterior segment of eye, NOS.
12.01	Removal of intraocular foreign body from anterior segment of eye with use of magnet.
12.02	Removal of intraocular foreign body from anterior segment of eye without use of magnet.
12.11	Iridotomy with transfixion.
12.12	Other iridotomy.
12.13	Excision of prolapsed iris.
12.14	Other iridectomy.
12.21	Diagnostic aspiration of anterior chamber of eye.
12.22	Biopsy of iris.

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477—Continued

Procedure code	Description
12.29	Other diagnostic procedures on iris, ciliary body, sclera, and anterior chamber.
12.31	Lysis of goniosynechiae.
12.32	Lysis of other anterior synechiae.
12.33	Lysis of posterior synechiae.
12.34	Lysis of corneovitreal adhesions.
12.35	Coreoplasty.
12.39	Other iridoplasty.
12.40	Removal of lesion of anterior segment of eye, NOS.
12.41	Destruction of lesion of iris, nonexcisional.
12.42	Excision of lesion of iris.
12.43	Destruction of lesion of ciliary body, nonexcisional.
12.44	Excision of lesion of ciliary body.
12.51	Goniopuncture without goniotomy.
12.52	Goniotomy without goniopuncture.
12.53	Goniotomy with goniopuncture.
12.54	Trabeculotomy ab externo.
12.55	Cyclodialysis.
12.59	Other facilitation of intraocular circulation.
12.61	Trephination of sclera with iridectomy.
12.62	Thermocauterization of sclera with iridectomy.
12.63	Iridencleisis and iridotasis.
12.64	Trabeculectomy ab externo.
12.65	Other scleral fistulization with iridectomy.
12.66	Postoperative revision of scleral fistulization procedure.
12.69	Other fistulizing procedure.
12.71	Cyclodiathermy.
12.73	Cyclophotocoagulation.
12.74	Diminution of ciliary body, NOS.
12.79	Other glaucoma procedures.
12.81	Suture of laceration of sclera.
12.82	Repair of scleral fistula.
12.83	Revision of operative wound of anterior segment, NEC.
12.84	Excision or destruction of lesion of sclera.
12.85	Repair of scleral staphyloma with graft.
12.86	Other repair of scleral staphyloma.
12.87	Scleral reinforcement with graft.
12.88	Other scleral reinforcement.
12.89	Other operations on sclera.
12.91	Therapeutic evacuation of anterior chamber.
12.92	Injection into interior chamber.
12.93	Removal or destruction of epithelial downgrowth from anterior chamber.
12.97	Other operations on iris.
12.98	Other operations on ciliary body.
12.99	Other operations on anterior chamber.
13.00	Removal of foreign body from lens, NOS.
13.01	Removal of foreign body from lens with use of magnet.
13.02	Removal of foreign body from lens without use of magnet.
13.72	Secondary insertion of intraocular lens prosthesis.
14.00	Removal of foreign body from posterior segment of eye, NOS.
14.01	Removal of foreign body from posterior segment of eye with use of magnet.
14.02	Removal of foreign body from posterior segment of eye without use of magnet.
14.11	Diagnostic aspiration of vitreous.
14.19	Other diagnostic procedures on retina, choroid, vitreous, and posterior chamber.

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477—Continued

Procedure code	Description
14.21	Destruction of chorioretinal lesion by diathermy.
14.22	Destruction of chorioretinal lesion by cryotherapy.
14.26	Destruction of chorioretinal lesion by radiation therapy.
14.27	Destruction of chorioretinal lesion by implantation of radiation source.
14.29	Other destruction of chorioretinal lesion.
14.31	Repair of retinal tear by diathermy.
14.32	Repair of retinal tear by cryotherapy.
14.39	Other repair of retinal tear.
14.41	Scleral buckling with implant.
14.49	Other scleral buckling.
14.51	Repair of retinal detachment with diathermy.
14.52	Repair of retinal detachment with cryotherapy.
14.53	Repair of retinal detachment with xenon arc photocoagulation.
14.54	Repair of retinal detachment with laser photocoagulation.
14.55	Repair of retinal detachment with photocoagulation of unspecified type.
14.59	Other repair of retinal detachment, NEC.
14.6	Removal of surgically implanted material from posterior segment of eye.
14.9	Other operations on retina, choroid, and posterior chamber.
15.01	Biopsy of extraocular muscle or tendon.
15.09	Other diagnostic procedures on extraocular muscles and tendons.
15.11	Recession of one extraocular muscle.
15.12	Advancement of one extraocular muscle.
15.19	Other operations on one extraocular muscle involving temporary detachment from globe.
15.21	Lengthening procedure on one extraocular muscle.
15.22	Shortening procedure on one extraocular muscle.
15.29	Other operations on one extraocular, muscle, NEC.
15.3	Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes.
15.4	Other operations on two or more extraocular muscles, one or both eyes.
15.5	Transposition of extraocular muscles.
15.6	Revision of extraocular muscle surgery.
15.7	Repair of injury of extraocular muscle.
15.9	Other operations on extraocular muscles and tendons.
16.01	Orbitotomy with bone flap.
16.02	Orbitotomy with insertion of orbital implant.
16.09	Other orbitotomy.
16.1	Removal of penetrating foreign body from eye, NOS.
16.22	Diagnostic aspiration of orbit.
16.23	Biopsy of eyeball and orbit.
16.29	Other diagnostic procedures on orbit and eyeball.
16.31	Removal of ocular contents with synchronous implant into scleral shell.
16.39	Other evisceration of eyeball.
16.41	Enucleation of eyeball with synchronous implant into Tenon's capsule with attachment of muscles.
16.42	Enucleation of eyeball with other synchronous implant.
16.49	Other enucleation of eyeball.

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477—Continued

Procedure code	Description
16.51	Exenteration of orbit with removal of adjacent structures.
16.52	Exenteration of orbit with therapeutic removal of orbital bone.
16.59	Other exenteration of orbit.
16.61	Secondary insertion of ocular implant.
16.62	Revision and reinsertion of ocular implant.
16.63	Revision of enucleation socket with graft.
16.64	Other revision of enucleation socket.
16.65	Secondary graft to exenteration cavity.
16.66	Other revision of exenteration cavity.
16.69	Other secondary procedures after removal of eyeball.
16.71	Removal of ocular implant.
16.72	Removal of orbital implant.
16.81	Repair of wound of orbit.
16.82	Repair of rupture of eyeball.
16.89	Other repair of injury of eyeball or orbit.
16.92	Excision of lesion of orbit.
16.93	Excision of lesion of eye, unspecified structure.
16.98	Other operations on orbit.
16.99	Other operations on eyeball.
18.79	Other plastic repair of external ear.
19.4	Myringoplasty.
20.49	Other mastoidectomy.
20.51	Excision of lesion of middle ear.
21.09	Control of epistaxis by other means.
21.69	Other turbinectomy.
22.63	Ethmoidectomy.
24.4	Excision of dental lesion of jaw.
28.2	Tonsillectomy without adenoidectomy.
29.4	Plastic operation on pharynx.
31.98	Other operations on larynx.
37.89	Revision or removal of pacemaker device.
38.09	Incision of vessel, lower limb veins.
39.32	Suture of vein.
39.53	Repair of arteriovenous fistula.
40.3	Regional lymph node excision.
44.15	Open biopsy of stomach.
45.11	Transabdominal endoscopy of small intestine.
45.21	Transabdominal endoscopy of large intestine.
45.26	Open biopsy of large intestine.
46.41	Revision of stoma of small intestine.
46.52	Closure of stoma of large intestine.
48.25	Open biopsy of rectum.
48.81	Incision of perirectal tissue.
48.82	Excision of perirectal tissue.
49.11	Anal fistulotomy.
49.12	Anal fistulectomy.
49.49	Other procedures on hemorrhoids.
49.59	Other anal sphincterotomy.
49.79	Other repair of anal sphincter.
51.99	Other operations on biliary tract, NEC.
53.51	Incisional hernia repair.
54.4	Excision or destruction of peritoneal tissue.
54.64	Suture of peritoneum.
55.12	Pyelostomy.
56.52	Revision of cutaneous uretero-ileostomy.
57.22	Revision or closure of vesicostomy.
57.91	Sphincterotomy of bladder.
57.97	Replacement of electronic bladder stimulator.
57.98	Removal of electronic bladder stimulator.
58.5	Release of urethral stricture.
58.99	Other operations on urethra and periurethral tissue, NEC.

TABLE 6g.—ADDITIONAL OR PROCEDURES THAT GROUP TO DRG 477—Continued

Procedure code	Description
59.79	Other repair of urinary stress incontinence, NEC.
64.98	Other operations on penis.
64.99	Other operations on male genital organs, NEC.
65.61	Removal of both ovaries and tubes at same operative episode.
68.29	Other excision or destruction of lesion of uterus.
68.5	Vaginal hysterectomy.
70.14	Other vaginotomy.
70.50	Repair of cystocele and rectocele.
71.09	Other incision of vulva and perineum.
76.11	Biopsy of facial bone.
77.38	Other division of bone, tarsals and metatarsals.
77.40	Biopsy of bone, unspecified site.
77.66	Local excision of lesion or tissue of bone, patella.
77.88	Other partial ostectomy, tarsals and metatarsals.
78.03	Bone graft, radius and ulna.
78.62	Removal of implanted devices from bone, humerus.
78.66	Removal of implanted devices from bone, patella.
78.67	Removal of implanted devices from bone, tibia and fibula.
78.69	Removal of implanted devices from bone, NEC.
79.12	Closed reduction of fracture with internal fixation, radius and ulna.
80.18	Other arthrotomy, foot and toe.
80.46	Division of joint capsule, ligament, or cartilage, knee.
80.76	Synovectomy, knee.
80.86	Other local excision or destruction of lesion of joint, knee.
81.57	Replacement of joint of foot and toe.
81.83	Other repair of shoulder.
82.01	Exploration of tendon sheath of hand.
82.09	Other incision of soft tissue of hand.
83.01	Exploration of tendon sheath.
83.09	Other incision of soft tissue.
83.13	Other tenotomy.
84.01	Amputation and disarticulation of finger.
86.65	Heterograft to skin.
86.89	Other repair and reconstruction of skin and subcutaneous tissue.
87.53	Intraoperative cholangiogram.

Table 6h.—Diagnosis Codes by Body Site Category for MDC 24

Body Site Category 1: Head

800.02–800.05	803.10–803.49
800.10	803.52–803.55
800.12–800.19	803.60–803.99
800.20	804.02–804.06
800.22–800.29	804.10–804.46
800.30	804.52–804.55
800.32–800.39	804.60–804.66
800.40	804.70–804.99
800.42–800.49	850.2–850.4
800.52–800.55	851.00–851.05
800.60–800.99	851.09–851.99
801.02–801.05	852.00–854.19
801.10–802.49	874.12
801.52–801.55	900.01–900.03
801.60–801.99	900.1
803.02–803.05	900.81–900.82

Body Site Category 2: Chest

807.07–807.08	901.0–901.42
807.14–807.19	901.83
807.3–807.6	901.89
819.1	901.9
839.71	927.01
860.0–860.5	958.0
861.00–862.9	958.1

Body Site Category 3: Abdomen

863.0–863.59	868.09
863.81–865.19	868.12–868.19
868.02	902.0–902.9

Body Site Category 4: Kidney

866.00–866.13
868.01
868.11

Body Site Category 5: Urinary

867.0–867.9

Body Site Category 6: Pelvis, Spine

805.8	868.03
805.7	868.04
806.00–806.60	926.11
806.70–806.9	926.19–926.9
808.0–808.9	952.00–952.9
809.1	953.5
839.52	953.8
839.59	954.8

Body Site Category 7: Upper Limb

812.10–812.19	831.10–831.19
812.30	832.10–832.19
812.31	887.0–887.7
812.50–812.59	903.00–903.9
813.10–813.18	927.00–927.8
813.30–813.33	953.4
813.50–813.54	954.9
813.90–813.93	955.0–955.8
818.1	958.6

Body Site Category 8: Lower Limb

820.00–821.39	904.0–904.2
823.10–823.12	904.40–904.54
823.30–823.32	904.7
823.90–823.92	926.12
828.0	928.00–928.11
828.1	928.8
835.10–835.13	928.9
836.60–836.69	956.0–956.3
837.1	956.8
896.0–897.7	956.9

TABLE 6i.—HIV-RELATED CONDITIONS NECESSARY FOR ASSIGNMENT TO MDC 25

Diagnosis code	Description	Major
003.1–003.9	Salmonella	Yes.
007.2	Coccidiosis	Yes.
009.0–009.3	Infectious enteritis	No.
010.00–018.96	Tuberculosis	Yes.
031.8–031.9	Mycobacterial disease	Yes.
038.0–038.9	Septicemia	Yes.
039.0–039.9	Actinomycotic infections.	Yes.

TABLE 6i.—HIV-RELATED CONDITIONS NECESSARY FOR ASSIGNMENT TO MDC 25—Continued

Diagnosis code	Description	Major
046.3	Progressive multifocal leukoencephalopathy.	Yes.
046.8–046.9	Slow virus infection of central nervous system, NEC and NOS.	Yes.
047.9	Viral meningitis, NOS	No.
049.8–049.9	Non-arthropod-borne viral disease of central nervous system, NEC and NOS.	Yes.
053.0–053.9	Herpes zoster	Yes.
054.0–054.9	Herpes simplex	Yes.
078.5	Cytomegalic inclusion disease.	Yes.
079.9	Viral infection, NOS	No.
110.0–110.9	Dermatophytosis	No.
111.0–111.9	Dermatomycosis, other and unspecified.	No.
112.0	Candidiasis of mouth	Yes.
112.3–112.9	Candidiasis	Yes.
114.0–114.9	Coccidioidomycosis	Yes.
115.00–115.99	Histoplasmosis	Yes.
117.5	Cryptococcosis	Yes.
118	Opportunistic mycoses	Yes.
127.2	Strongyloidiasis	Yes.
130.0–130.9	Toxoplasmosis	Yes.
136.3	Pneumocystosis	Yes.
173.0–173.9	Other malignant neoplasm of skin.	Yes.
200.00–200.08	Reticulosarcoma	Yes.
200.20–200.28	Burkitt's tumor or lymphoma.	Yes.
200.80–200.88	Other named variants	Yes.
202.80–202.88	Other lymphomas	Yes.
260–269.9	Nutritional deficiencies	No.
276.5	Volume depletion	No.
279.00–279.9	Disorders involving the immune mechanism.	No.
280.0–281.9	Iron deficiency anemias.	No.
283.0–283.9	Acquired hemolytic anemias.	No.
284.8–284.9	Aplastic anemia, NEC and NOS.	No.
285.9	Anemia, NOS	No.
287.4	Secondary thrombocytopenia.	No.
287.5	Thrombocytopenia, NOS.	No.
288.0	Agranulocytosis	No.
289.4	Hypersplenism	No.
289.9	Diseases of blood and blood-forming organs, NOS.	No.
290.10–290.13	Presenile dementia	Yes.
294.9	Organic brain syndrome (chronic), NOS.	Yes.
298.9	Psychoses, NOS	Yes.
310.9	Nonpsychotic mental disorder following organic brain damage, NOS.	Yes.
323.9	Encephalitis, NOS	Yes.
336.9	Disease of spinal cord, NOS.	Yes.
341.9	Demyelinating disease of central nervous system, NOS.	Yes.
348.3	Encephalopathy, NOS	Yes.

TABLE 6i.—HIV-RELATED CONDITIONS NECESSARY FOR ASSIGNMENT TO MDC 25—Continued

Diagnosis code	Description	Major
348.9	Condition of brain, NOS.	Yes.
349.9	Disorders of central nervous system, NOS.	Yes.
357.0	Acute infective polyneuritis.	No.
357.8–357.9	Polyneuropathy, NEC and NOS.	No.
362.10–362.18	Other background retinopathy and retinal vascular changes.	No.
369.00–369.9	Profound impairment, both eyes.	No.
480.9	Viral pneumonia, NOS	Yes.
486	Pneumonia, organism, NOS.	Yes.
516.8	Other specified alveolar and parietoalveolar pneumonopathies.	No.
527.9	Unspecified disease of the salivary glands.	No.
528.6	Leukoplakia of oral mucosa, including tongue.	No.
558.1–558.9	Other noninfectious gastroenteritis and colitis.	No.
579.9	Intestinal malabsorption, NOS.	No.
683	Acute lymphadenitis	No.
709.9	Disorder of skin and subcutaneous tissue, NOS.	No.
711.00–711.09	Pyogenic arthritis	No.
711.90–711.99	Infective arthritis, NOS	No.
716.90–716.99	Arthropathy, NOS	No.
729.2	Neuralgia, neuritis, and radiculitis, NOS.	No.
780.6	Pyrexia of unknown origin.	No.
780.7	Malaise and fatigue	No.
780.8	Hyperhidrosis	No.
782.1	Rash and other nonspecific skin eruption.	No.
783.2	Abnormal loss of weight.	No.
783.4	Lack of expected normal physiological development.	No.
785.6	Enlargement of lymph nodes.	No.
786.00–786.09	Dyspnea and respiratory abnormalities.	No.
789.1	Hepatomegaly	No.
789.2	Splenomegaly	No.
799.4	Cachexia	No.

TABLE 6j.—PROCEDURE CODES ASSIGNED TO REVISED DRGS IN MDC 5

Procedure code	Description
DRG 108, Other Cardiothoracic Procedures	
35.31	Operations on papillary muscle.
35.32	Operations on chordae tendineae.
35.33	Annuloplasty.
35.34	Infundibulectomy.

TABLE 6j.—PROCEDURE CODES ASSIGNED TO REVISED DRGS IN MDC 5—Continued

Procedure code	Description
35.35	Operations on trabeculae carneae cordis.
35.39	Operations on other structures adjacent to valves of heart.
35.42	Creation of septal defect in heart.
35.50	Repair of unspecified septal defect of heart with prosthesis.
35.51	Repair of atrial septal defect with prosthesis, open technique.
35.52	Repair of atrial septal defect with prosthesis, closed technique.
35.53	Repair of ventricular septal defect with prosthesis.
35.54	Repair of endocardial cushion defect with prosthesis.
35.60	Repair of unspecified septal defect of heart with tissue graft.
35.61	Repair of atrial septal defect with tissue graft.
35.62	Repair of ventricular septal defect with tissue graft.
35.63	Repair of endocardial cushion defect with fissue graft.
35.70	Other and unspecified repair of unspecified septal defect of heart.
35.71	Other and unspecified repair of atrial septal defect.
35.72	Other and unspecified repair of ventricular septal defect.
35.73	Other and unspecified repair of endocardial cushion defect.
35.81	Total repair of tetralogy of Fallot.
35.82	Total repair of total anomalous pulmonary venous connection.
35.83	Total repair of truncus arteriosus.
35.84	Total correction of transposition of great vessels, NEC.
35.91	Interatrial transposition of venous return.
35.92	Creation of conduit between right ventricle and pulmonary artery.
35.93	Creation of conduit between left ventricle and aorta.
35.94	Creation of conduit between atrium and pulmonary artery.
35.95	Revision of corrective procedure on heart.
35.98	Other operations on septa of heart.
35.99	Other operations on valves of heart.
36.03	Open chest coronary artery angioplasty.
36.2	Heart revascularization by arterial implant.
36.3	Other heart revascularization.
36.91	Repair of aneurysm of coronary vessel.
36.99	Other operations on vessels of heart.
37.10	Incision of heart, NOS.
37.11	Cardiotomy.
37.32	Excision of aneurysm of heart.
37.33	Excision or destruction of other lesion or tissue of heart.
Or, the following combination of procedures	
38.44	Resection of vessel with replacement, aorta, abdominal.
38.45	Resection of vessel with replacement, thoracic vessel.
DRG 110, Major Cardiovascular Procedures with CC	
DRG 111, Major Cardiovascular Procedures without CC	
35.00	Closed heart valvotomy, unspecified valve.
35.01	Closed heart valvotomy, aortic valve.
35.02	Closed heart valvotomy, mitral valve.
35.03	Closed heart valvotomy, pulmonary valve.

TABLE 6j.—PROCEDURE CODES ASSIGNED TO REVISED DRGS IN MDC 5—Continued

Procedure code	Description
35.04	Closed heart valvotomy, tricuspid valve.
36.00	Removal of coronary artery obstruction, NOS.
37.12	Pericardiotomy.
37.24	Biopsy of pericardium.
37.31	Pericardiectomy.
37.4	Repair of heart and pericardium.
37.61	Implant of pulsation balloon.
37.62	Implant of other heart assist system.
37.63	Replacement and repair of heart assist system.
37.91	Open chest cardiac massage.
37.99	Other operations on heart and pericardium, NEC.
38.04	Incision of vessel, aorta.
38.05	Incision of vessel, other thoracic vessels.
38.06	Incision of vessel, abdominal arteries.
38.07	Incision of vessel, abdominal veins.
38.14	Endarterectomy, aorta.
38.15	Endarterectomy, other thoracic vessels.
38.16	Endarterectomy, abdominal arteries.
38.34	Resection of vessel with anastomosis, aorta.
38.35	Resection of vessel with anastomosis, other thoracic vessels.
38.36	Resection of vessel with anastomosis, abdominal arteries.
38.37	Resection of vessel with anastomosis, abdominal veins.
38.44	Resection of vessel with replacement, aorta, abdominal.
38.45	Resection of vessel with replacement, thoracic vessel.
38.46	Resection of vessel with replacement, abdominal arteries.
38.47	Resection of vessel with replacement, abdominal veins.
38.55	Ligation and stripping of varicose veins, thoracic vessel.
38.64	Other excision of vessels, aorta, abdominal.
38.65	Other excision of vessels, thoracic vessel.
38.66	Other excision of vessels, abdominal arteries.
38.67	Other excision of vessels, abdominal veins.
38.84	Other surgical occlusion of vessels, aorta, abdominal.
38.85	Other surgical occlusion of vessels, thoracic vessel.
38.86	Other surgical occlusion of vessels, abdominal arteries.
38.87	Other surgical occlusion of vessels, abdominal veins.
39.0	Systemic to pulmonary artery shunt.
39.1	Intra-abdominal venous shunt.
39.21	Caval-pulmonary artery anastomosis.
39.22	Aorta-subclavian-carotid bypass.
39.23	Other intrathoracic vascular shunt or bypass.
39.24	Aorta-renal bypass.
39.25	Aorta-iliac-femoral bypass.
39.26	Other intra-abdominal vascular shunt or bypass.
39.52	Other repair of aneurysm.
39.54	Re-entry operation (aorta).
DRG 112, Percutaneous Cardiovascular Procedures	
35.96	Percutaneous valvuloplasty.
36.01	Single vessel percutaneous transluminal coronary angioplasty [PTCA] without mention of thrombolytic agent.

TABLE 6j.—PROCEDURE CODES ASSIGNED TO REVISED DRGS IN MDC 5—Continued

Procedure code	Description
36.02	Single vessel percutaneous transluminal coronary angioplasty [PTCA] with thrombolytic agent.
36.05	Multiple vessel percutaneous transluminal coronary angioplasty [PTCA] performed during the same operation, with or without mention of thrombolytic agent.
36.09	Other specified removal of coronary artery obstruction.
37.26	Cardiac electrophysiologic stimulation and recording studies.
37.27	Cardiac mapping.
37.34	Catheter ablation of lesion or tissues of heart.
DRG 478, Other Vascular Procedures with CC	
DRG 479, Other Vascular Procedures with CC	
05.24	Presacral sympathectomy.
37.64	Removal of heart assist system.
38.00	Incision of vessel, NOS.
38.02	Incision of vessel, other vessels of head and neck.
38.03	Incision of vessel, upper limb vessels.
38.08	Incision of vessel, lower limb arteries.
38.10	Endarterectomy, NOS.
38.12	Endarterectomy, other vessels of head and neck.
38.13	Endarterectomy, upper limb vessels.
38.18	Endarterectomy of lower limb arteries.
38.21	Biopsy of blood vessel.
38.29	Other diagnostic procedures on blood vessels.
38.30	Resection of vessel with anastomosis, NOS.
38.32	Resection of vessel with anastomosis, other vessels of head and neck.
38.33	Resection of vessel with anastomosis, upper limb vessels.
38.38	Resection of vessel with anastomosis, lower limb arteries.
38.40	Resection of vessel with replacement, NOS.
38.42	Resection of vessel with replacement, other vessels of head and neck.
38.43	Resection of vessel with replacement, upper limb vessels.
38.48	Resection of vessel with replacement, lower limb arteries.
38.52	Ligation and stripping of varicose veins, other vessels of head and neck.
38.57	Ligation and stripping of varicose veins, abdominal veins.
38.60	Other excision of vessels, NOS.
38.62	Other excision of vessels, other vessels of head and neck.
38.63	Other excision of vessels, upper limb vessels.
38.68	Other excision of vessels, lower limb arteries.
38.7	Interruption of the vena cava.
38.80	Other surgical occlusion of vessels, NOS.
38.82	Other surgical occlusion of vessels, other vessels of head and neck.
38.83	Other surgical occlusion of vessels, upper limb vessels.
38.88	Other surgical occlusion of vessels, lower limb arteries.
39.29	Other (peripheral) vascular shunt or bypass.
39.30	Suture of unspecified vessel.
39.31	Suture of artery.
39.41	Control of hemorrhage following vascular surgery.
39.49	Other revisions of vascular procedure.
39.51	Clipping of aneurysm.

TABLE 6j.—PROCEDURE CODES ASSIGNED TO REVISED DRGS IN MDC 5—Continued

Procedure code	Description
39.53	Repair of arteriovenous fistula.
39.55	Reimplantation of aberrant renal vessel.
39.56	Repair of blood vessel with tissue patch graft.
39.57	Repair of blood vessel with synthetic patch graft.
39.58	Repair of blood vessel with unspecified type of patch graft.
39.59	Other repair of vessel.
39.7	Periarterial sympathectomy.
39.8	Operations on carotid body and other vascular bodies.
39.91	Freeing of vessel.
39.94	Replacement of vessel-to-vessel cannula.
39.99	Other operation on vessels.

TABLE 6k.—DIAGNOSES THAT GROUP TO DRG 482 WHEN A TRACHEOSTOMY IS PERFORMED

Diagnosis code	Description
012.30–012.36	Tuberculous laryngitis.
032.0	Faucial diphtheria.
032.1	Nasopharyngeal diphtheria.
032.2	Anterior nasal diphtheria.
032.3	Laryngeal diphtheria.
034.0	Streptococcal sore throat.
074.0	Herpangina.
098.6	Gonococcal infection of pharynx.
101	Vincent's angina.
102.5	Gangosa.
140.0–140.9	Malignant neoplasm of lip.
141.0–141.9	Malignant neoplasm of tongue.
142.0–142.9	Malignant neoplasm of major salivary gland.
143.0–143.9	Malignant neoplasm of gum.
144.0–144.9	Malignant neoplasm of floor of mouth.
145.0–145.9	Malignant neoplasm of other and unspecified parts of mouth.
146.0–146.9	Malignant neoplasm of oropharynx.
147.0–147.9	Malignant neoplasm of nasopharynx.
148.0–148.9	Malignant neoplasm of hypopharynx.
149.0–149.9	Malignant neoplasm of other and ill-defined sites within the lip, oral cavity, and pharynx.
160.0–160.9	Malignant neoplasm of nasal cavities, middle ear, and accessory sinuses.
161.0–161.9	Malignant neoplasm of larynx.
165.0	Malignant neoplasm of upper respiratory tract, NOS.
193	Malignant neoplasm of thyroid gland.
195.0	Malignant neoplasm of of head, face, and neck, NOS.
196.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face, and neck.
200.01	Reticulosarcoma of lymph nodes of head, face, and neck.
200.11	Lymphosarcoma of lymph nodes of head, face, and neck.

TABLE 6k.—DIAGNOSES THAT GROUP TO DRG 482 WHEN A TRACHEOSTOMY IS PERFORMED—Continued

Diagnosis code	Description
200.21	Burkitt's tumor or lymphoma of head, face, and neck.
200.81	Lymphosarcoma and reticulosarcoma of lymph nodes of head, face, and neck, NEC.
201.01	Hodgkin's paragranuloma of lymph nodes of head, face, and neck.
201.11	Hodgkin's granuloma of lymph nodes of head, face, and neck.
201.21	Hodgkin's sarcoma of lymph nodes of head, face, and neck.
201.41	Lymphocytic-histiocytic predominance of lymph nodes of head, face, and neck.
201.51	Nodular sclerosis of lymph nodes of head, face, and neck.
201.61	Mixed cellularity of lymph nodes of head, face, and neck.
201.71	Lymphocytic depletion of lymph nodes of head, face, and neck.
201.91	Hodgkin's disease of lymph nodes of head, face, and neck, NOS.
202.01	Nodular lymphoma of lymph nodes of head, face, and neck.
202.11	Mycosis fungoides of lymph nodes of head, face, and neck.
202.21	Sezary's disease of lymph nodes of head, face, and neck.
202.31	Malignant histiocytosis of lymph nodes of head, face, and neck.
202.41	Leukemic reticuloendotheliosis of lymph nodes of head, face, and neck.
202.51	Letterer-Siwe disease of lymph nodes of head, face, and neck.
202.61	Malignant mast cell tumors of lymph nodes of head, face, and neck.
202.81	Lymphomas of lymph nodes of head, face, and neck.
202.91	Malignant neoplasms of lymphoid and histiocytic tissue of lymph nodes of head, face, and neck.
210.0–210.9	Benign neoplasm of lip, oral cavity, and pharynx.
212.0	Benign neoplasm of nasal cavities, middle ear, and accessory sinuses.
212.1	Benign neoplasm of larynx.
213.0	Benign neoplasm of bones of skull and face.
213.1	Benign neoplasm of lower jaw bone.
226	Benign neoplasm of thyroid glands.
230.0	Carcinoma in situ of lip, oral cavity, and pharynx.
231.0	Carcinoma in situ of larynx.
235.0	Neoplasm of uncertain behavior of major salivary glands.
235.1	Neoplasm of uncertain behavior of lip, oral cavity, and pharynx.
235.6	Neoplasm of uncertain behavior of larynx.

TABLE 6k.—DIAGNOSES THAT GROUP TO DRG 482 WHEN A TRACHEOSTOMY IS PERFORMED—Continued

Diagnosis code	Description
242.00–242.91	Thyrotoxicosis with or without goiter.
245.0–245.9	Thyroiditis.
246.3	Hemorrhage and infarction of thyroid.
246.8	Disorders of thyroid, NEC.
246.9	Disorders of thyroid, NOS.
460	Acute nasopharyngitis.
462	Acute pharyngitis.
463	Acute tonsillitis.
464.0	Acute laryngitis.
464.20–464.21	Acute laryngotracheitis.
464.30–464.31	Acute epiglottitis.
464.4	Croup.
470	Deviated nasal septum.
472.1	Chronic pharyngitis.
472.2	Chronic nasopharyngitis.
474.0–474.9	Chronic disease of tonsils and adenoids.
475	Peritonsillar abscess.
476.0	Chronic laryngitis.
476.1	Chronic laryngotracheitis.
478.20–478.29	Diseases of pharynx, NEC.
478.30–478.34	Paralysis of vocal cords or larynx.
478.4	Polyp of vocal cord or larynx.
478.5	Disease of vocal cords, NEC.
478.6	Edema of larynx.
478.70–478.79	Diseases of larynx, NEC.
478.8	Upper respiratory tract hypersensitivity reaction, site unspecified.
478.9	Other and unspecified diseases of upper respiratory tract.
520.0–529.9	Diseases of oral cavity, salivary glands, and jaws.
748.2	Web of larynx.
748.3	Anomalies of larynx, trachea, and bronchus, NEC.
750.0	Tongue tie.
750.10–750.19	Anomaly of tongue, NEC.
750.25	Congenital fistula of lip.
750.26	Anomaly of mouth, NEC.
750.27	Diverticulum of pharynx.
750.29	Anomaly of pharynx, NEC.
784.8	Hemorrhage from throat.
807.5	Fracture of larynx and trachea, closed.
807.6	Fracture of larynx and trachea, open.
873.20–873.29	Open wound of nose, without mention of complication.
873.30–873.39	Open wound of nose, complicated.
873.43	Open wound of lip, without mention of complication.
873.44	Open wound of jaw, without mention of complication.
873.53	Open wound of lip, complicated.
873.54	Open wound of jaw, complicated.
873.60	Open wound of mouth, without mention of complication, NOS.
873.61	Open wound of buccal mucosa, without mention of complication.
873.62	Open wound of gum, without mention of complication.
873.64	Open wound of tongue and floor of mouth, without mention of complication.
873.65	Open wound of palate, without mention of complication.
873.69	Open wound of mouth, without mention of complication, NEC.

TABLE 6k.—DIAGNOSES THAT GROUP TO DRG 482 WHEN A TRACHEOSTOMY IS PERFORMED—Continued

Diagnosis code	Description
873.70	Open wound of mouth, complicated, NOS.
873.71	Open wound of buccal mucosa, complicated.
873.72	Open wound of gum, complicated.
873.74	Open wound of tongue and floor of mouth, complicated.
873.75	Open wound of palate, complicated.
873.79	Open wound of mouth, complicated, NEC.
874.00	Open wound of larynx with trachea, without mention of complication.
874.01	Open wound of larynx, without mention of complication.
874.10	Open wound of larynx with trachea, complicated.
874.11	Open wound of larynx, complicated.
874.2	Open wound of thyroid gland, without mention of complication.
874.3	Open wound of thyroid gland, complicated.
874.4	Open wound of pharynx, without mention of complication.
874.5	Open wound of pharynx, complicated.
933.0	Foreign body in pharynx.
933.1	Foreign body in larynx.
935.0	Foreign body in mouth.
947.0	Burn of mouth and pharynx.
V10.01	Personal history of malignant neoplasm of tongue.
V10.02	Personal history of malignant neoplasm of oral cavity and pharynx, NEC.
V10.21	Personal history of malignant neoplasm of larynx.

TABLE 6L.—REVISED DIAGNOSIS CODE TITLES

Diagnosis code	Description
250.00	Diabetes mellitus without mention of complication, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.01	Diabetes mellitus without mention of complication, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.10	Diabetes with ketoacidosis, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.11	Diabetes with ketoacidosis, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.20	Diabetes with hyperosmolar coma, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.21	Diabetes with hyperosmolar coma, Type I [insulin dependent type] [IDDM type] [juvenile type].

TABLE 6L.—REVISED DIAGNOSIS CODE TITLES—Continued

Diagnosis code	Description
250.30	Diabetes with other coma, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.31	Diabetes with other coma, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.40	Diabetes with renal manifestations, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.41	Diabetes with renal manifestations, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.50	Diabetes with ophthalmic manifestation, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.51	Diabetes with ophthalmic manifestations, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.60	Diabetes with neurological manifestations, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.61	Diabetes with neurological manifestations, Type I [insulin dependsnt type] [IDDM type] [juvenile type].
250.70	Diabetes with peripheral circulatory disorders, Type II [non-nsulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.71	Diabetes with peripheral circulatory disorders, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.80	Diabetes with other specified manifestations, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.81	Diabetes with other specified manifestations, Type I [insulin dependent type] [IDDM type] [juvenile type].
250.90	Diabetes with unspecified complications, Type II [non-insulin dependent type] [NIDDM type] [adult-onset type] or unspecified type.
250.91	Diabetes with unspecified complications, Type I [insulin dependent type] [IDDM type] [juvenile type].
654.20	Previous cesarean section unspecified as to episode of care or not applicable.
654.21	Previous cesarean section delivered, with or without mention of antepartum condition.
654.23	Previous cesarean section antepartum condition or complication.
654.90	Abnormality of organs and soft tissues of pelvis, unspecified as to episode of care or not applicable.
654.91	Other and unspecified delivered, with or without mention of antepartum condition.

TABLE 6L.—REVISED DIAGNOSIS CODE TITLES—Continued

Diagnosis code	Description
654.92	Other and unspecified delivered, with mention of postpartum complication.
654.93	Other and unspecified antepartum condition or complication.
654.94	Other and unspecified postpartum condition or complication.
V56	Encounter for dialysis.

TABLE 6L.—REVISED DIAGNOSIS CODE TITLES—Continued

Diagnosis code	Description
V58	Encounter for other and unspecified procedures and aftercare.
V58.0	Encounter for radiotherapy.
V58.1	Encounter for chemotherapy.

TABLE 6m.—REVISED PROCEDURE CODE TITLES

Procedure code	Description
39.6	Extracorporeal circulation and procedures auxiliary to heart surgery.
42.91	Ligation of esophageal varices.
86.06	Insertion of totally implantable infusion pump.

BILLING CODE 4120-01-M

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
001	27232	19.0656	5	8	13	23	38
002	5765	19.6161	4	7	13	23	41
003	4	22.5000	5	5	21	21	43
004	4960	15.7226	4	7	11	19	33
005	45608	7.5874	3	4	5	9	14
006	1342	3.1073	1	1	2	3	6
007	5452	24.2694	2	6	12	26	55
008	3513	4.8395	1	1	3	6	10
009	1980	11.9763	2	4	7	14	24
010	18907	11.7241	2	4	8	14	24
011	4285	7.0637	1	3	5	9	14
012	22144	10.8622	2	4	7	12	20
013	5167	9.4742	3	4	7	11	17
014	325189	10.7299	2	5	8	12	20
015	139159	5.6098	2	3	4	7	10
016	11906	9.6810	3	4	7	11	18
017	4382	6.3204	2	3	5	7	11
018	12966	9.2139	2	4	6	11	18
019	8953	5.6354	1	2	4	7	11
020	5874	12.8294	2	5	9	15	26
021	811	10.5413	3	4	8	13	22
022	10859	5.8576	2	3	4	7	11
023	3706	6.4827	1	2	4	8	13
024	50250	7.8037	2	3	5	9	15
025	25600	4.6991	1	2	3	6	9
026	47	5.5319	1	2	4	7	10
027	2906	9.9608	1	2	5	11	22
028	7328	10.1219	2	3	6	12	20
029	4076	4.9728	1	2	3	6	10
030	1	1.0000	1	1	1	1	1
031	4096	6.5640	1	2	4	8	13
032	3750	3.7723	1	2	3	5	7
034	12435	9.3629	2	3	6	11	19
035	4394	5.3773	1	2	4	6	10
036	21137	2.9240	1	2	2	3	5
037	3105	4.4377	1	2	3	5	9
038	1057	4.0265	1	1	2	3	6
039	18790	1.9802	1	1	2	2	3
040	4436	3.1808	1	1	2	3	7
041	3	2.3333	2	2	2	3	3
042	22867	2.9383	1	1	2	3	5
043	268	7.0522	2	3	4	6	10
044	2200	6.8036	3	4	6	8	12
045	2880	4.3573	1	2	3	6	8
046	3022	6.2909	1	2	5	8	12
047	2477	3.8195	1	1	2	5	8
049	7370	15.6521	3	7	12	18	30
050	5434	2.8738	1	1	2	3	5
051	686	3.1706	1	1	2	3	7
052	165	3.8485	1	1	2	4	8
053	8263	3.1866	1	1	2	3	7

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
054	1	58.0000	58	58	58	58	58
055	6344	2.7919	1	1	1	2	5
056	1099	2.7389	1	1	2	3	6
057	789	6.6134	1	2	3	7	14
059	280	2.5321	1	1	1	2	5
061	433	4.8822	1	1	2	4	12
062	2	4.0000	1	1	7	7	7
063	5736	7.3963	1	2	4	8	16
064	5434	9.9334	1	2	6	12	22
065	30621	4.1902	2	2	3	5	8
066	9170	4.1806	1	2	3	5	7
067	441	6.1474	2	3	4	7	11
068	15487	6.1983	2	3	5	7	11
069	5687	4.5711	2	3	4	6	8
070	26	3.1538	1	2	2	4	4
071	158	5.5063	2	3	4	7	11
072	761	5.6347	1	2	3	6	10
073	7876	6.1823	1	2	4	7	12
074	2	1.5000	1	1	2	2	2
075	30211	14.4222	6	8	11	17	27
076	34561	14.9048	3	7	11	18	29
077	4412	7.1224	1	2	5	10	15
078	26837	10.5255	4	7	9	13	17
079	111214	12.4588	4	6	10	15	23
080	11247	8.5400	3	5	7	11	15
081	2	8.5000	1	1	16	16	16
082	73385	9.7650	2	4	7	12	20
083	7509	8.4198	2	4	7	10	15
084	2237	4.9361	2	2	4	6	9
085	16377	9.1833	2	4	7	11	18
086	2306	5.9367	2	3	5	7	12
087	66389	8.3979	2	4	7	10	16
088	93184	7.6840	3	4	6	9	14
089	348338	9.0900	3	5	7	11	16
090	56947	6.6735	3	4	6	8	11
091	33	6.2424	3	3	5	9	12
092	8537	9.1974	3	4	7	11	17
093	1794	6.3740	2	3	5	8	12
094	9061	9.6794	3	5	7	12	18
095	1648	5.8823	2	3	5	7	11
096	215016	7.2903	3	4	6	9	13
097	48970	5.4618	2	3	5	7	9
098	11	5.1818	2	3	5	6	8
099	35105	6.0098	2	3	4	7	11
100	12511	3.3707	1	2	3	4	6
101	19952	7.0307	2	3	5	9	13
102	4807	4.5602	1	2	4	6	9
103	167	34.3413	11	17	23	36	65
104	12965	23.2943	10	13	18	27	41
105	13014	17.0718	8	9	12	18	30
106	54489	16.4442	9	11	14	18	26

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
107	40394	12.6148	7	8	10	13	19
108	21167	17.8045	7	9	14	20	32
109	11024	12.4503	1	4	9	16	26
110	72993	16.0120	6	8	12	18	30
111	16374	8.9829	4	6	8	11	14
112	124015	7.2737	2	3	5	9	15
113	32189	18.3657	6	8	13	22	35
114	8605	13.1529	3	6	10	16	26
115	6776	14.6513	6	8	12	18	25
116	55659	7.6325	2	4	6	9	14
117	3036	5.6647	1	2	4	7	12
118	8091	4.7029	1	1	3	5	10
119	3951	5.9825	1	2	3	6	14
120	21455	17.7531	2	6	12	22	37
121	146135	10.1603	4	6	9	12	17
122	120893	7.2512	2	4	7	9	12
123	62708	5.6374	1	1	3	7	13
124	93025	6.0355	1	2	5	8	12
125	96113	3.0766	1	1	2	4	7
126	3878	22.1462	5	11	19	31	42
127	539474	8.0253	3	4	6	10	15
128	27837	8.7753	4	6	8	10	14
129	7291	5.2890	1	1	2	7	13
130	61785	8.2794	2	4	7	10	15
131	29444	6.0591	1	2	6	8	11
132	14375	5.6273	2	3	4	7	11
133	5781	4.1308	1	2	3	5	7
134	34238	5.6204	2	3	4	7	10
135	6356	6.9072	2	3	5	8	13
136	1721	4.2010	1	2	3	5	8
137	3	3.3333	1	1	2	7	7
138	171247	6.2173	2	3	5	7	12
139	78986	4.0665	1	2	3	5	8
140	358985	4.7625	2	3	4	6	8
141	72857	5.9018	2	3	4	7	11
142	41297	4.0206	1	2	3	5	7
143	102032	3.5426	1	2	3	4	6
144	44759	7.6706	2	3	6	9	15
145	7731	4.3163	1	2	3	5	8
146	7076	15.2134	8	10	12	17	25
147	2261	10.3998	6	8	10	12	15
148	130552	17.2842	8	10	13	20	31
149	24185	10.2185	6	8	9	11	15
150	18994	14.5167	6	8	12	17	25
151	6108	8.6935	4	5	8	11	14
152	7784	9.9490	3	5	8	12	18
153	3325	7.2547	3	5	7	9	11
154	50880	17.2750	5	8	13	21	34
155	7363	8.9401	3	5	8	11	15
156	4	8.2500	2	2	7	9	15
157	15263	6.9214	2	3	5	8	14

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
158	15172	3.3347	1	2	3	4	6
159	14734	6.9938	2	3	5	8	13
160	15160	3.8268	1	2	3	5	7
161	30442	4.7752	1	2	3	6	10
162	40104	2.4725	1	1	2	3	4
163	17	4.2941	1	1	3	7	7
164	4381	12.3492	6	8	10	14	21
165	2309	7.8237	4	6	7	9	12
166	2540	8.1780	3	5	7	10	14
167	2469	4.6825	2	3	4	6	8
168	2257	6.9916	1	2	4	8	15
169	2157	3.0631	1	1	2	4	6
170	12523	16.6887	3	7	12	20	35
171	1821	7.9121	2	4	6	10	16
172	30576	10.7400	2	4	8	13	22
173	4453	5.9753	1	2	4	7	12
174	140221	7.1438	2	4	6	8	13
175	27437	4.6804	2	3	4	6	8
176	11845	7.9863	3	4	6	9	15
177	17495	6.4250	2	3	5	8	11
178	7911	4.6098	2	3	4	6	8
179	7649	9.3883	3	4	7	11	18
180	58863	7.8834	2	4	6	9	15
181	24700	4.8674	2	3	4	6	9
182	243605	6.4659	2	3	5	8	12
183	87651	4.4179	1	2	4	6	8
184	62	4.9839	1	2	3	5	10
185	3876	6.3880	1	2	4	8	13
186	1	11.0000	11	11	11	11	11
187	1494	3.1439	1	1	2	4	7
188	41284	7.5298	2	3	5	9	15
189	11560	4.1084	1	1	3	5	8
190	134	4.9701	2	3	4	6	9
191	9582	21.5002	7	10	16	26	42
192	1240	11.3556	4	6	9	14	20
193	13279	17.3804	7	10	14	21	31
194	2213	11.4573	5	7	10	14	19
195	21001	13.0787	6	8	11	15	21
196	3347	9.0478	5	6	8	11	14
197	63213	10.0549	4	6	8	12	17
198	37362	6.1219	3	4	5	7	10
199	3181	15.2377	5	8	12	19	28
200	1905	15.1795	3	6	11	20	31
201	5060	13.1609	3	5	9	16	28
202	15022	9.9298	2	4	8	13	20
203	29796	9.8211	2	4	7	13	20
204	35109	8.1002	3	4	6	10	15
205	19754	9.5317	2	4	7	12	19
206	3028	5.4967	1	2	4	7	11
207	35710	7.3302	2	4	6	9	14
208	15630	4.3037	1	2	3	6	8

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
209	218662	12.0211	7	8	10	14	18
210	99423	14.7449	7	9	12	16	24
211	39049	10.8196	6	7	10	13	16
212	14	4.8571	2	3	4	6	8
213	5443	13.8490	4	6	10	16	27
214	30774	12.7213	5	7	10	15	23
215	35170	7.7753	3	5	7	9	13
216	5187	14.9693	2	5	11	20	32
217	12491	23.0119	3	8	15	29	50
218	14390	10.6712	3	5	8	12	20
219	18172	6.0200	2	3	5	7	11
220	6	7.6667	1	6	8	10	10
221	3900	10.2951	2	4	7	12	21
222	6579	5.3649	1	2	4	7	11
223	11626	4.9088	2	2	3	5	9
224	8554	3.2614	1	2	3	4	6
225	12974	5.0523	1	2	3	6	11
226	5368	9.8059	2	3	6	12	21
227	8329	3.9707	1	2	3	5	8
228	5094	4.1912	1	2	2	4	9
229	3737	2.6313	1	1	2	3	5
230	2745	6.7111	1	2	4	8	14
231	7077	6.2861	1	2	3	7	14
232	695	6.2115	1	2	3	7	16
233	5437	13.3377	3	5	9	16	27
234	4243	5.7999	1	2	4	7	11
235	6460	13.3372	2	4	8	14	31
236	38298	9.8518	2	4	7	12	18
237	1776	6.3846	1	3	5	7	11
238	5823	14.2014	4	7	10	17	29
239	57399	10.3544	3	5	8	13	20
240	10812	9.8440	3	4	7	12	19
241	5104	6.0997	2	3	5	8	11
242	2383	11.1695	3	5	8	14	24
243	120158	6.9385	1	3	5	9	13
244	10937	7.7177	2	3	6	9	14
245	6795	5.4650	1	2	4	7	10
246	1936	5.9747	2	3	4	7	11
247	9497	5.0701	1	2	4	6	10
248	6325	6.0890	2	3	5	7	12
249	5733	6.2154	1	2	4	7	13
250	3659	6.8989	1	2	5	8	13
251	4428	3.5467	1	1	2	4	7
253	15870	8.7976	2	3	6	10	17
254	15603	5.0867	1	2	4	6	10
255	3	8.0000	1	1	3	20	20
256	9031	5.5990	1	2	4	7	11
257	26544	6.1117	3	4	5	7	10
258	28347	4.4545	2	3	4	5	7
259	3378	7.0601	1	2	4	8	15
260	4180	3.1053	1	2	3	4	6

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TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
261	3568	2.9308	1	2	2	3	5
262	2249	2.7550	1	1	2	3	6
263	24376	23.3410	6	9	16	28	48
264	5375	12.8409	3	6	9	16	26
265	4897	10.0523	2	3	6	12	22
266	5340	4.4487	1	2	3	6	9
267	511	4.5127	1	2	3	5	9
268	1674	4.8943	1	1	2	5	10
269	10325	12.8954	2	4	9	16	26
270	5935	4.7987	1	2	3	6	10
271	19417	12.6744	3	6	9	14	24
272	6713	9.9042	3	5	7	11	19
273	2941	7.3451	2	3	5	9	15
274	3732	10.4686	2	4	7	13	22
275	602	5.2209	1	1	3	6	11
276	977	5.4268	1	2	4	7	10
277	60569	8.9365	3	5	7	11	16
278	26911	6.5098	3	4	5	8	11
279	8	4.2500	2	2	3	6	6
280	12728	6.8656	2	3	5	8	13
281	8964	4.4862	1	2	3	5	8
282	2	4.5000	3	3	6	6	6
283	5743	7.4207	2	3	5	9	14
284	3000	5.5057	1	2	4	6	9
285	3954	21.8331	6	9	16	26	43
286	1537	13.3494	5	7	9	15	25
287	5791	20.3067	5	8	13	23	42
288	507	11.4872	3	5	7	10	21
289	3649	6.5541	2	3	4	6	13
290	9284	4.2808	2	2	3	4	7
291	141	2.1915	1	1	2	3	4
292	4701	18.1772	4	7	13	21	36
293	674	8.2893	2	3	6	10	17
294	94451	7.6380	3	4	6	9	13
295	3286	6.0161	2	3	4	7	11
296	191578	8.7743	2	4	6	10	17
297	51809	5.5399	2	3	4	6	10
298	73	5.0137	1	2	3	4	10
299	922	6.8883	1	3	5	8	14
300	10942	9.8021	3	4	7	12	19
301	2575	5.8726	2	3	4	7	11
302	6063	17.5552	8	10	14	21	31
303	16252	14.4755	6	8	11	17	26
304	14238	14.1844	4	7	10	17	27
305	4861	7.1948	2	3	6	9	13
306	11780	9.7002	3	4	7	12	18
307	5651	5.0526	2	3	4	6	9
308	8449	10.0398	2	4	7	12	20
309	4620	4.5742	1	2	3	6	9
310	34009	6.0112	1	2	4	7	12
311	24414	3.0181	1	1	2	4	6

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
312	3781	5.7265	1	2	4	7	12
313	2704	3.1032	1	1	2	4	6
314	5	6.8000	1	1	6	10	12
315	27361	13.3301	2	3	8	16	29
316	38941	9.5757	2	4	7	12	19
317	1329	3.2107	1	1	2	4	6
318	7129	9.3996	2	3	6	12	20
319	1321	4.2112	1	1	3	5	9
320	145034	8.7916	3	5	7	10	15
321	34505	6.1038	2	4	5	7	10
322	56	5.1786	2	3	4	7	9
323	24609	4.1575	1	2	3	5	9
324	14312	2.7269	1	1	2	3	5
325	10359	6.2959	2	3	4	7	12
326	4944	3.9401	1	2	3	5	7
327	5	5.4000	4	4	5	6	8
328	1734	5.2082	1	2	4	7	10
329	513	3.0019	1	1	2	4	6
331	26891	7.6777	2	3	6	10	15
332	8105	4.5105	1	2	3	6	9
333	381	7.3097	1	3	5	10	17
334	12472	10.7983	6	7	9	12	17
335	8579	8.3738	5	7	8	10	12
336	100343	6.5989	3	4	5	7	12
337	99038	4.3171	2	3	4	5	6
338	9643	5.5543	1	1	2	7	14
339	4645	4.0372	1	1	2	4	9
340	1	2.0000	2	2	2	2	2
341	15193	4.6560	1	2	4	5	8
342	622	3.6045	1	1	2	4	8
344	3579	6.4809	2	3	5	8	12
345	2041	5.4900	1	2	4	6	11
346	9050	8.8548	2	3	6	11	18
347	1671	4.0102	1	1	2	5	9
348	4747	5.7702	1	2	4	7	12
349	2677	3.0904	1	1	2	4	6
350	8473	5.9729	2	3	5	7	10
351	1	1.0000	1	1	1	1	1
352	1015	4.1616	1	2	3	5	8
353	2065	13.7579	5	7	10	16	25
354	7664	9.3201	4	5	7	10	16
355	6766	5.7802	4	4	5	7	8
356	31825	5.0676	3	3	5	6	8
357	6647	13.2061	5	7	10	16	24
358	17195	7.7227	4	5	6	8	13
359	26670	5.2722	3	4	5	6	7
360	4269	6.0759	1	2	4	7	13
361	357	5.3165	1	1	3	6	12
362	21	3.0952	1	1	2	3	5
363	4888	4.8372	1	2	3	5	10
364	3540	3.5819	1	1	2	4	7

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
365	3532	11.5127	3	4	8	14	25
366	5183	10.5524	2	3	7	13	23
367	1225	4.1943	1	1	3	5	9
368	1467	7.7587	3	4	6	9	14
369	2783	4.7808	1	2	3	6	10
370	505	8.2436	3	4	5	8	14
371	740	4.7514	3	4	4	5	6
372	330	4.0182	2	2	3	4	6
373	2113	2.6233	1	2	2	3	3
374	313	4.0958	2	2	3	4	5
375	5	5.0000	1	1	2	6	14
376	117	4.0427	1	2	2	4	6
377	38	5.2368	1	2	3	6	8
378	127	4.0079	2	3	4	5	6
379	269	2.8996	1	1	2	3	5
380	62	2.6129	1	1	2	3	5
381	278	2.0827	1	1	1	2	4
382	84	1.3214	1	1	1	1	2
383	809	4.5575	1	2	3	6	9
384	104	3.3654	1	1	2	3	8
385	3	4.3333	1	1	3	9	9
387	1	19.0000	19	19	19	19	19
389	30	7.9000	1	3	5	12	21
390	36	5.9722	1	2	5	8	11
392	2587	16.8794	5	8	12	20	34
393	2	4.5000	4	4	5	5	5
394	2096	11.1584	1	2	6	12	25
395	72925	6.4629	1	3	5	8	12
396	67	2.9851	1	1	2	4	6
397	10479	7.7714	2	3	6	9	15
398	13533	9.0409	3	4	7	11	17
399	2384	5.6242	1	2	4	7	11
400	7870	15.2846	3	6	10	19	32
401	6473	15.2864	3	6	11	19	32
402	3188	6.3002	1	2	4	8	13
403	24821	12.2684	2	5	9	15	26
404	6434	6.4165	1	2	5	8	13
406	3995	15.8688	4	7	12	20	32
407	1342	8.1304	2	4	7	10	14
408	8402	7.0857	1	2	4	8	17
409	7511	10.3671	2	4	6	14	23
410	140517	3.4865	1	2	3	4	6
411	310	4.3903	1	1	2	4	7
412	302	3.1258	1	1	2	4	6
413	10014	11.4391	2	4	8	14	24
414	2822	6.8179	1	2	5	8	14
415	24642	21.8847	5	9	16	27	43
416	113336	10.7826	2	5	8	13	20
417	37	7.3514	1	3	6	10	15
418	12362	8.7063	3	4	7	11	16
419	15800	7.7635	2	4	6	9	14

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
420	4246	5.8163	2	3	5	7	10
421	13894	5.7367	2	3	4	7	10
422	102	5.0098	1	2	3	7	10
423	6434	12.0345	3	5	8	14	25
424	3012	23.3941	2	8	16	28	47
425	16525	6.8373	2	3	5	8	13
426	7746	8.0901	2	3	6	10	17
427	1951	8.5331	2	3	6	10	19
428	1234	10.5972	2	3	7	12	22
429	29410	12.5210	3	4	7	13	23
430	58984	12.8849	3	5	9	16	26
431	300	9.2967	2	3	6	10	18
432	599	8.4875	1	2	4	8	19
433	5186	4.8351	1	2	3	6	11
434	22513	10.3661	2	4	7	14	24
435	21013	10.6439	2	4	7	15	27
439	1220	13.2000	1	3	8	16	29
440	6745	17.8731	3	6	11	22	40
441	1086	4.1731	1	1	2	5	8
442	47905	9.8890	1	2	6	12	22
443	13784	6.1747	1	2	4	8	13
444	4165	7.0754	2	3	5	8	13
445	2735	4.9733	1	2	4	6	9
446	2	13.0000	4	4	22	22	22
447	2949	3.6429	1	2	3	4	7
448	1	3.0000	3	3	3	3	3
449	30202	6.3774	1	3	4	7	12
450	9520	3.7733	1	1	3	4	7
451	17	5.1176	1	2	5	8	9
452	25721	7.2035	1	3	5	8	15
453	9240	4.3706	1	2	3	5	9
454	3605	7.6632	1	2	5	9	16
455	1275	3.9082	1	1	2	4	7
456	187	9.6043	1	1	4	9	25
457	159	6.4969	1	1	2	9	17
458	1764	23.5896	5	9	17	30	49
459	564	17.0372	3	6	11	21	37
460	2493	9.5941	2	4	7	12	19
461	7145	5.1924	1	1	2	4	12
462	6215	18.7783	5	8	15	25	35
463	9619	7.2300	2	3	5	9	14
464	3262	4.4234	1	2	3	5	9
465	748	3.2139	1	1	2	3	7
466	4613	5.6666	1	1	2	5	11
467	4530	4.8770	1	1	2	4	9
46[illegible]	73237	19.6874	3	8	14	24	39
471	5163	16.7310	8	10	14	19	27
472	223	36.0538	2	14	29	50	74
473	8417	17.4955	2	4	11	27	42
474	13741	50.7085	14	24	39	61	98
475	63670	14.1510	2	6	11	18	28

TABLE 7A - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V7.0

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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
476	10836	17.9097	7	10	15	21	30
477	33367	10.6242	1	3	7	13	22

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
001	26562	18.1140	5	8	13	22	36
002	5221	17.7223	4	7	12	22	35
003	4	22.5000	5	5	21	21	43
004	4902	15.3372	4	6	11	19	32
005	45510	7.5226	3	4	5	9	14
006	1342	3.1073	1	1	2	3	6
007	5314	22.9565	2	6	12	24	50
008	3513	4.8178	1	1	3	6	10
009	1876	11.2921	2	4	7	13	22
010	18905	11.7165	2	4	8	14	24
011	4274	7.0264	1	3	5	9	14
012	22072	10.7125	2	4	7	12	20
013	5163	9.4532	3	4	7	11	17
014	324301	10.6147	2	4	8	12	20
015	139138	5.5988	2	3	4	7	10
016	11841	9.5874	3	4	7	11	18
017	4382	6.2898	2	3	5	7	11
018	12130	8.2352	2	4	6	10	15
019	8509	5.3801	1	2	4	7	11
020	6984	12.9785	2	5	9	16	26
021	800	10.5575	3	4	8	13	22
022	10856	5.8440	2	3	4	7	11
023	3703	6.4496	1	2	4	8	13
024	50131	7.7284	2	3	5	9	15
025	25633	4.6994	1	2	3	6	9
026	47	5.5319	1	2	4	7	10
027	2619	8.5838	1	1	4	10	20
028	6913	9.7013	2	3	6	12	20
029	4059	4.9512	1	2	3	6	10
030	1	1.0000	1	1	1	1	1
031	4064	6.4840	1	2	4	7	13
032	3748	3.7716	1	2	3	5	7
034	12335	9.1164	2	3	6	11	18
035	4398	5.3720	1	2	4	6	10
036	21136	2.9238	1	2	2	3	5
037	3101	4.4347	1	2	3	5	9
038	1057	4.0265	1	1	2	3	6
039	18398	1.9723	1	1	2	2	3
040	4825	3.1007	1	1	2	3	7
041	3	2.3333	2	2	2	3	3
042	22867	2.9383	1	1	2	3	5
043	268	7.0522	2	3	4	6	10
044	2200	6.8036	3	4	6	8	12
045	2880	4.3573	1	2	3	6	8
046	3016	6.2427	1	2	4	8	12
047	2476	3.8170	1	1	2	5	8
049	3778	12.1728	2	4	8	15	26
050	5422	2.8515	1	1	2	3	5
051	685	3.1664	1	1	2	3	7
052	164	3.7744	1	1	2	4	8
053	8251	3.1537	1	1	2	3	7

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
054	1	58.0000	58	58	58	58	58
055	5468	2.6357	1	1	1	2	5
056	1803	2.4226	1	1	1	3	5
057	759	6.1594	1	2	3	7	13
059	277	2.4621	1	1	1	2	5
061	427	4.7471	1	1	2	4	12
062	2	4.0000	1	1	7	7	7
063	5133	6.1184	1	2	4	7	13
064	5078	9.2042	1	2	5	11	21
065	30619	4.1881	2	2	3	5	8
066	9168	4.1698	1	2	3	5	7
067	413	5.6755	2	3	4	7	10
068	15482	6.1832	2	3	5	7	11
069	5675	4.5637	2	3	4	6	8
070	26	3.1538	1	2	2	4	4
071	153	5.2614	2	3	4	6	11
072	761	5.6347	1	2	3	6	10
073	7666	6.0073	1	2	4	7	12
074	2	1.5000	1	1	2	2	2
075	30125	14.4156	6	8	11	17	27
076	34430	14.8635	3	7	11	18	29
077	4403	7.1049	1	2	5	10	15
078	26835	10.5256	4	7	9	13	17
079	110864	12.4454	4	6	10	15	23
080	11221	8.5339	3	5	7	11	15
081	2	8.5000	1	1	16	16	16
082	73385	9.7650	2	4	7	12	20
083	7302	8.3465	2	4	6	10	15
084	2237	4.9397	2	2	4	6	9
085	16378	9.1831	2	4	7	11	18
086	2305	5.9371	2	3	5	7	12
087	66389	8.3979	2	4	7	10	16
088	93185	7.6840	3	4	6	9	14
089	348227	9.0895	3	5	7	11	16
090	56861	6.6696	3	4	6	8	11
091	33	6.2424	3	3	5	9	12
092	8533	9.1956	3	4	7	11	17
093	1787	6.3677	2	3	5	8	12
094	8822	9.5953	3	5	7	12	18
095	1646	5.8815	2	3	5	7	11
096	215114	7.2911	3	4	6	9	13
097	48872	5.4546	2	3	5	7	9
098	11	5.1818	2	3	5	6	8
099	35088	6.0116	2	3	4	7	11
100	12521	3.3691	1	2	3	4	6
101	19877	7.0176	2	3	5	9	13
102	4806	4.5601	1	2	4	6	9
103	167	34.3413	11	17	23	36	65
104	12938	23.2099	10	13	18	27	41
105	12900	16.6263	8	9	12	18	29
106	55855	16.2810	9	11	14	18	25

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
107	51117	13.7544	7	8	10	15	23
108	7595	17.0197	7	9	13	19	31
110	44426	14.7768	3	8	11	17	28
111	8611	9.3987	4	7	9	11	14
112	83614	6.5221	2	3	5	8	13
113	34568	19.5841	6	9	14	23	38
114	8500	13.1007	3	6	10	16	26
115	6766	14.5875	6	8	12	18	25
116	55721	7.6323	2	4	6	9	14
117	2996	5.5975	1	2	4	7	12
118	8009	4.6243	1	1	3	5	10
119	3949	5.9663	1	2	3	6	14
120	20727	16.4594	2	6	11	21	34
121	145989	10.1144	4	6	9	12	17
122	120869	7.2433	2	4	7	9	12
123	62428	5.4957	1	1	3	7	13
124	92995	6.0246	1	2	5	8	12
125	96107	3.0746	1	1	2	4	7
126	3868	22.0861	5	11	19	31	42
127	539085	7.9959	3	4	6	10	15
128	27836	8.7752	4	6	8	10	14
129	7217	4.9367	1	1	2	6	13
130	61753	8.2673	2	4	7	10	15
131	29457	6.0587	1	2	6	8	11
132	14368	5.6162	2	3	4	7	11
133	5780	4.1287	1	2	3	5	7
134	34233	5.6150	2	3	4	7	10
135	6354	6.9057	2	3	5	8	13
136	1722	4.2003	1	2	3	5	8
137	3	3.3333	1	1	2	7	7
138	171118	6.1957	2	3	5	7	12
139	79019	4.0665	1	2	3	5	8
140	358970	4.7607	2	3	4	6	8
141	72825	5.8959	2	3	4	7	11
142	41317	4.0206	1	2	3	5	7
143	102030	3.5376	1	2	3	4	6
144	44655	7.6420	2	3	6	9	15
145	7734	4.3095	1	2	3	5	8
146	7058	15.1065	8	10	12	17	25
147	2261	10.3998	6	8	10	12	15
148	129931	17.1347	8	10	13	20	30
149	24220	10.2160	6	8	9	11	15
150	18908	14.3852	6	8	12	17	25
151	6120	8.6694	4	5	8	11	14
152	7751	9.8858	3	5	8	12	18
153	3348	7.2428	3	5	7	9	11
154	50091	17.0441	5	8	13	20	33
155	7738	8.8961	3	5	8	11	15
156	4	8.2500	2	2	7	9	15
157	15214	6.8861	2	3	5	8	14
158	15211	3.3446	1	2	3	4	6

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
159	14699	6.9282	2	3	5	8	13
160	15175	3.8289	1	2	3	5	7
161	30397	4.7542	1	2	3	6	10
162	40132	2.4736	1	1	2	3	4
163	17	4.2941	1	1	3	7	7
164	4370	12.2670	6	8	10	14	20
165	2311	7.8256	4	6	7	9	12
166	2536	8.1282	3	5	7	10	14
167	2470	4.6830	2	3	4	6	8
168	2185	6.6215	1	2	3	8	15
169	2124	2.9619	1	1	2	3	6
170	12410	16.5481	3	7	12	20	34
171	1835	7.9025	2	4	6	10	16
172	30539	10.7084	2	4	8	13	22
173	4444	5.9723	1	2	4	7	12
174	137845	7.1595	2	4	6	8	13
175	29748	4.7064	2	3	4	6	8
176	11841	7.9656	3	4	6	9	15
177	16843	6.4773	2	4	5	8	11
178	8561	4.6353	2	3	4	6	8
179	7648	9.3868	3	4	7	11	18
180	58795	7.8575	2	4	6	9	15
181	24738	4.8638	2	3	4	6	9
182	243322	6.4569	2	3	5	8	12
183	87829	4.4165	1	2	4	6	8
184	62	4.9839	1	2	3	5	10
185	3844	6.3254	1	2	4	8	13
186	1	11.0000	11	11	11	11	11
187	1491	3.1355	1	1	2	4	7
188	41239	7.5111	2	3	5	9	15
189	11573	4.1053	1	1	3	5	8
190	134	4.9701	2	3	4	6	9
191	9306	21.2334	7	10	16	26	41
192	1300	11.2546	4	6	9	14	20
193	13197	17.3650	7	10	14	21	30
194	2279	11.4138	5	7	10	14	19
195	20775	13.0662	6	8	11	15	21
196	3549	9.0256	5	6	8	11	14
197	59217	10.2872	4	6	8	12	17
198	41293	6.0831	3	4	5	7	10
199	3179	15.2158	5	8	12	19	28
200	1870	15.0305	3	6	11	19	30
201	5046	13.0587	3	5	9	16	27
202	15017	9.9217	2	4	8	13	20
203	29790	9.8117	2	4	7	13	20
204	35074	8.0687	3	4	6	10	15
205	19663	9.4995	2	4	7	12	19
206	3067	5.5504	1	2	4	7	11
207	35562	7.3309	2	4	6	9	14
208	15773	4.3059	1	2	4	6	8
209	217946	11.9801	7	8	10	14	18

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
210	97953	14.6177	7	9	12	16	24
211	39019	10.8153	6	7	10	13	16
212	14	4.8571	2	3	4	6	8
213	5435	13.8031	4	6	10	16	27
214	30653	12.6441	5	7	10	15	23
215	35225	7.7786	3	5	7	9	13
216	5181	14.9413	2	5	11	19	32
217	12300	22.8204	3	8	15	29	49
218	14228	10.4341	3	5	8	12	19
219	18166	6.0267	2	3	5	7	11
220	6	7.6667	1	6	8	10	10
221	3885	10.2440	2	4	7	12	21
222	6586	5.3609	1	2	4	7	11
223	11537	4.8225	2	2	3	5	9
224	8557	3.2596	1	2	3	4	6
225	12970	5.0449	1	2	3	6	11
226	4997	9.8707	2	3	6	12	21
227	7808	3.9818	1	2	3	5	8
228	5068	4.1192	1	2	2	4	8
229	3754	2.6436	1	1	2	3	5
230	2665	6.6390	1	2	4	8	14
231	8018	6.1793	1	2	3	7	13
232	694	6.2017	1	2	3	7	16
233	5333	13.0169	3	5	9	16	26
234	4231	5.7757	1	2	4	7	11
235	6382	13.2867	2	4	8	14	31
236	37325	9.7554	2	4	7	12	18
237	1776	6.3846	1	3	5	7	11
238	5819	14.1801	4	7	10	17	29
239	57389	10.3500	3	5	8	13	20
240	10810	9.7844	3	4	7	12	19
241	5092	6.0988	2	3	5	8	11
242	2378	11.1072	3	5	8	14	24
243	120101	6.9272	1	3	5	9	13
244	10916	7.7129	2	3	6	9	14
245	6813	5.4651	1	2	4	7	10
246	1934	5.9741	2	3	4	7	11
247	9496	5.0700	1	2	4	6	10
248	6324	6.0854	2	3	5	7	12
249	5732	6.2059	1	2	4	7	13
250	3624	6.8510	1	2	4	8	13
251	4435	3.5470	1	1	2	4	7
253	15816	8.7470	2	3	6	10	17
254	15602	5.0876	1	2	4	6	10
255	3	8.0000	1	1	3	20	20
256	9025	5.5886	1	2	4	7	11
257	26528	6.1059	3	4	5	7	10
258	28356	4.4548	2	3	4	5	7
259	3371	7.0454	1	2	4	8	15
260	4184	3.1064	1	2	3	4	6
261	3568	2.9308	1	2	2	3	5

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
262	2249	2.7550	1	1	2	3	6
263	24343	23.2930	6	9	16	28	47
264	5382	12.8350	3	6	9	16	26
265	4877	10.0002	2	3	6	12	22
266	5347	4.4494	1	2	3	6	9
267	509	4.5029	1	2	3	5	9
268	1671	4.8701	1	1	2	5	10
269	10287	12.8545	2	4	9	16	26
270	5939	4.8055	1	2	3	6	10
271	19410	12.6541	3	6	9	14	23
272	6701	9.9002	3	5	7	11	19
273	2935	7.3332	2	3	5	9	15
274	3728	10.4525	2	4	7	13	22
275	603	5.2239	1	1	3	6	11
276	977	5.4268	1	2	4	7	10
277	60519	8.9318	3	5	7	11	16
278	27040	6.5031	3	4	5	8	11
279	8	4.2500	2	2	3	6	6
280	12697	6.8685	2	3	5	8	13
281	8973	4.4868	1	2	3	5	8
282	2	4.5000	3	3	6	6	6
283	5715	7.4026	2	3	5	9	14
284	2994	5.5073	1	2	4	6	9
285	3947	21.7829	6	9	16	26	43
286	1529	13.1975	5	7	9	15	25
287	5779	20.1756	5	8	13	23	42
288	504	11.4643	3	5	7	10	22
289	3633	6.3994	2	3	4	6	13
290	9135	3.9711	2	2	3	4	7
291	141	2.1915	1	1	2	3	4
292	4677	18.0272	4	7	13	21	35
293	674	8.2938	2	3	6	10	17
294	94417	7.6233	3	4	6	9	13
295	3285	6.0055	2	3	4	7	11
296	191346	8.7481	2	4	6	10	17
297	51804	5.5386	2	3	4	6	10
298	73	5.0137	1	2	3	4	10
299	921	6.8903	1	2	5	8	14
300	10908	9.7016	3	4	7	12	19
301	2572	5.8729	2	3	4	7	11
302	6054	17.5230	8	10	14	21	31
303	16233	14.4010	6	8	11	17	26
304	14201	14.1034	4	7	10	17	27
305	4860	7.1895	2	3	6	9	13
306	11766	9.6865	3	4	7	12	18
307	5661	5.0533	2	3	4	6	9
308	8412	9.9699	2	4	7	12	20
309	4623	4.5743	1	2	3	6	9
310	33987	5.9997	1	2	4	7	12
311	24429	3:0190	1	1	2	4	6
312	3780	5.7241	1	2	4	7	12

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
313	2704	3.1032	1	1	2	4	6
314	5	6.8000	1	1	6	10	12
315	27253	13.2016	2	3	8	16	29
316	38885	9.5253	2	4	7	12	19
317	1329	3.2107	1	1	2	4	6
318	7126	9.4028	2	3	6	12	20
319	1324	4.2062	1	1	3	5	9
320	145003	8.7764	3	5	7	10	15
321	34503	6.1025	2	4	5	7	10
322	56	5.1786	2	3	4	7	9
323	24601	4.1572	1	2	3	5	9
324	14320	2.7268	1	1	2	3	5
325	10353	6.2639	2	3	4	7	12
326	4945	3.9418	1	2	3	5	7
327	5	5.4000	4	4	5	6	8
328	1734	5.2082	1	2	4	7	10
329	513	3.0019	1	1	2	4	6
331	26805	7.6511	2	3	6	10	15
332	8102	4.5095	1	2	3	6	9
333	381	7.3097	1	3	5	10	17
334	12463	10.7780	6	7	9	12	17
335	8579	8.3727	5	7	8	10	12
336	100119	6.5976	3	4	5	7	12
337	99254	4.3184	2	3	4	5	6
338	9643	5.5543	1	1	2	7	14
339	4645	4.0372	1	1	2	4	9
340	1	2.0000	2	2	2	2	2
341	15192	4.6500	1	2	4	5	8
342	622	3.6045	1	1	2	4	8
344	3579	6.4809	2	3	5	8	12
345	2040	5.4662	1	2	4	6	11
346	9048	8.8542	2	3	6	11	18
347	1672	4.0096	1	1	2	5	9
348	4744	5.7639	1	2	4	7	12
349	2678	3.0885	1	1	2	4	6
350	8467	5.9610	2	3	5	7	10
351	1	1.0000	1	1	1	1	1
352	1013	4.1500	1	2	3	5	8
353	2065	13.7579	5	7	10	16	25
354	7654	9.2793	4	5	7	10	16
355	6770	5.7801	4	4	5	7	8
356	27834	5.0319	3	3	4	6	8
357	6641	13.1833	5	7	10	16	24
358	17175	7.7157	4	5	6	8	13
359	26683	5.2721	3	4	5	6	7
360	8199	5.7103	2	3	4	7	10
361	417	5.3070	1	2	3	6	12
362	21	3.0952	1	1	2	3	5
363	4888	4.8372	1	2	3	5	10
364	3539	3:5770	1	1	2	4	7
365	3527	11.4933	3	4	8	14	25

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
366	5179	10.4949	2	3	7	13	23
367	1225	4.1943	1	1	3	5	9
368	1465	7.7536	3	4	6	9	14
369	2783	4.7808	1	2	3	6	10
370	504	8.2460	3	4	5	8	14
371	741	4.7544	3	4	4	5	6
372	330	4.0182	2	2	3	4	6
373	2113	2.6233	1	2	2	3	3
374	312	4.0224	2	2	3	4	5
375	5	5.0000	1	1	2	6	14
376	116	3.5690	1	2	2	4	6
377	38	5.2368	1	2	3	6	8
378	127	4.0079	2	3	4	5	6
379	269	2.8996	1	1	2	3	5
380	62	2.6129	1	1	2	3	5
381	278	2.0827	1	1	1	2	4
382	84	1.3214	1	1	1	1	2
383	809	4.5575	1	2	3	6	9
384	104	3.3654	1	1	2	3	8
385	3	4.3333	1	1	3	9	9
387	1	19.0000	19	19	19	19	19
389	30	7.9000	1	3	5	12	21
390	36	5.9722	1	2	5	8	11
392	2251	16.0875	5	8	11	19	32
393	2	4.5000	4	4	5	5	5
394	2066	10.8117	1	2	6	12	24
395	72789	6.4556	1	3	5	8	12
396	67	2.9851	1	1	2	4	6
397	10460	7.7414	2	3	6	9	15
398	12817	8.5682	3	4	7	10	16
399	2282	5.4514	1	2	4	7	10
400	7752	14.9356	3	6	10	18	32
401	6379	15.0031	3	6	11	19	31
402	3174	6.2486	1	2	4	8	13
403	24745	12.2132	2	5	9	15	26
404	6424	6.4208	1	2	5	8	13
406	3958	15.7658	4	7	12	20	31
407	1337	8.0748	2	4	7	9	14
408	8321	6.9320	1	2	4	7	16
409	7503	10.3476	2	4	6	14	23
410	140500	3.4832	1	2	3	4	6
411	310	4.3903	1	1	2	4	7
412	302	3.1258	1	1	2	4	6
413	10000	11.3989	2	4	8	14	24
414	2815	6.7947	1	2	5	8	14
415	24290	21.3779	5	9	15	26	42
416	113011	10.7300	2	5	8	13	20
417	37	7.3514	1	3	6	10	15
418	12359	8.7057	3	4	7	11	16
419	15701	7.7525	2	4	6	9	14
420	4247	5.8206	2	3	5	7	10

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
421	13818	5.7006	2	3	4	7	10
422	102	5.0098	1	2	3	7	10
423	6237	11.5977	3	5	8	14	23
424	2986	22.9973	2	8	16	27	46
425	16525	6.8373	2	3	5	8	13
426	7745	8.0899	2	3	6	10	17
427	1951	8.5331	2	3	6	10	19
428	1234	10.5972	2	3	7	12	22
429	29399	12.5121	3	4	7	13	23
430	58950	12.8839	3	5	9	16	26
431	300	9.2967	2	3	6	10	18
432	597	8.4288	1	2	4	8	18
433	5185	4.8303	1	2	3	6	11
434	22488	10.3286	2	4	7	14	24
435	21020	10.6450	2	4	7	15	27
439	1218	13.0829	1	3	8	16	29
440	6713	17.7579	3	5	11	22	40
441	1086	4.1731	1	1	2	5	8
442	47685	9.7476	1	2	6	12	22
443	13779	6.1691	1	2	4	8	13
444	4002	7.1137	2	3	5	9	13
445	2851	4.9362	1	2	4	6	9
446	2	13.0000	4	4	22	22	22
447	2932	3.6194	1	2	3	4	7
448	1	3.0000	3	3	3	3	3
449	30155	6.3104	1	3	4	7	12
450	9522	3.7734	1	1	3	4	7
451	17	5.1176	1	2	5	8	9
452	25696	7.1894	1	3	5	8	15
453	9250	4.3652	1	2	3	5	9
454	3599	7.6179	1	2	5	9	16
455	1274	3.9027	1	1	2	4	7
456	186	9.3280	1	1	4	9	25
457	159	6.4969	1	1	2	9	17
458	1749	23.3265	5	9	17	30	48
459	559	16.6494	3	6	11	21	36
460	2487	9.5316	2	4	7	11	18
461	7118	5.1711	1	1	2	4	12
462	6215	18.7783	5	8	15	25	35
463	9606	7.1977	2	3	5	9	14
464	3260	4.4221	1	2	3	5	8
465	746	3.2185	1	1	2	3	7
466	4605	5.6080	1	1	2	5	11
467	4527	4.7994	1	1	2	4	9
468	62972	19.6781	4	8	15	24	38
471	5155	16.6766	8	10	14	19	27
472	208	35.4375	2	14	27	49	70
473	8408	17.4353	2	4	11	27	42
475	63519	14.1391	2	6	11	18	28
476	11516	17.7211	7	10	14	21	30
477	40796	10.7477	1	3	7	13	22

TABLE 7B - MEDICARE PROSPECTIVE PAYMENT SYSTEM
SELECTED PERCENTILE LENGTHS OF STAY
FY89 MEDPAR UPDATE 06/90 GROUPER V8.0

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DRG	NUMBER DISCHARGES	ARITHMETIC MEAN LOS	10TH PERCENTILE	25TH PERCENTILE	50TH PERCENTILE	75TH PERCENTILE	90TH PERCENTILE
478	65954	12.7912	3	6	9	16	25
479	19883	6.2087	1	3	5	8	12
480	29	35.8621	3	17	25	31	58
481	51	40.6078	14	24	40	52	63
482	5557	19.0471	6	10	14	21	36
483	25153	52.3790	15	25	40	64	100
484	273	27.2857	1	7	18	37	65
485	1511	19.2032	7	10	14	21	35
486	2255	19.9583	2	8	14	24	42
487	2735	11.8742	2	4	9	14	23
488	261	26.0268	7	12	20	31	48
489	1801	16.3698	3	6	11	19	32
490	780	9.1038	2	3	6	11	20

BILLING CODE 4120-01-C

TABLE 8.—STATEWIDE AVERAGE COST-TO-CHARGE RATIOS FOR URBAN AND RURAL HOSPITALS (CASE WEIGHTED) 9/90

State	Urban	Rural
Alabama	0.5122	0.5582
Alaska	0.6420	0.8409
Arizona	0.6002	0.6257
Arkansas	0.6173	0.5992
California	0.5727	0.5932
Colorado	0.6241	0.6738
Connecticut	0.7217	0.7820
Delaware	0.6396	0.6546
District of Columbia	0.5908	.....
Florida	0.5394	0.5326
Georgia	0.6069	0.5864
Hawaii	0.6134	0.7537
Idaho	0.7299	0.7299
Illinois	0.6002	0.6585
Indiana	0.7101	0.7328
Iowa	0.6581	0.7236
Kansas	0.6326	0.7418
Kentucky	0.6077	0.5974
Louisiana	0.6458	0.6720
Maine	0.7112	0.6855
Maryland	0.7731	0.7892
Massachusetts	0.6836	0.7892
Michigan	0.6209	0.6909
Minnesota	0.6912	0.7336
Mississippi	0.6233	0.6471
Missouri	0.5765	0.6080
Montana	0.6468	0.6979
Nebraska	0.6110	0.7165
Nevada	0.5244	0.7414
New Hampshire	0.7217	0.6980
New Jersey	0.7241	.....
New Mexico	0.6371	0.5900
New York	0.6695	0.7599
North Carolina	0.6945	0.6236
North Dakota	0.7551	0.6862
Ohio	0.6672	0.6811
Oklahoma	0.5937	0.6276
Oregon	0.6774	0.7067
Pennsylvania	0.5546	0.6107
Puerto Rico	0.5293	0.6658
Rhode Island	0.7640	.....
South Carolina	0.5981	0.5834
South Dakota	0.6289	0.6852
Tennessee	0.5792	0.6008
Texas	0.5847	0.6783
Utah	0.6682	0.7051
Vermont	0.6979	0.7119
Virginia	0.6151	0.6196
Washington	0.7169	0.7417
West Virginia	0.6301	0.5872
Wisconsin	0.7777	0.7847
Wyoming	0.7299	0.7949

TABLE 9.—SOLE COMMUNITY HOSPITAL-WEATHER DATA

NOAA weather station city/state	Average annual days of		
	Precipitation	Snow/ice	Fog
Birmingham, AL (Municipal Airport)	116.4	0.6	8.5
Birmingham, AL (City Office)	115.0	0.6	[1] N/A
Huntsville, AL	116.2	1.3	19.8
Mobile, AL	122.4	0.2	40.1
Montgomery, AL	107.6	0.2	21.8
Anchorage, AK	115.5	20.2	25.7
Annette, AK	224.7	15.8	15.2
Barrow, AK	77.4	6.7	59.8
Barter Island, AK	87.2	12.3	72.9
Bethel, AK	137.7	15.7	50.3

TABLE 9.—SOLE COMMUNITY HOSPITAL-WEATHER DATA—Continued

NOAA weather station city/state	Average annual days of		
	Precipitation	Snow/ice	Fog
Bettles, AK	107.3	26.0	5.8
Big Delta, AK	91.8	16.7	9.6
Cold Bay, AK	223.1	20.6	22.2
Fairbanks, AK	106.0	21.4	18.5
Gulkana, AK	89.8	18.1	17.8
Homer, AK	145.3	20.4	9.0
Juneau, AK	220.5	26.8	21.3
King Salmon, AK	152.0	15.1	33.2
Kodiak, AK	193.7	22.5	12.5
Kotzebue, AK	106.6	15.3	18.4
McGrath, AK	136.5	28.2	13.0
Nome, AK	128.4	18.0	21.3
St. Paul Island, AK	206.6	18.0	57.5
Talkeetna, AK	136.6	34.0	4.2
Valdez, AK	197.8	56.8	17.8
Yakutat, AK	234.8	48.2	30.8
Flagstaff, AZ	81.4	22.1	11.4
Phoenix, AZ	35.8	0.0	1.6
Tucson, AZ	53.0	0.5	1.0
Winslow, AZ	54.6	4.1	4.3
Yuma, AZ	17.0	0.0	1.5
Fort Smith, AR	95.6	2.7	15.1
Little Rock, AR	103.3	2.0	15.9
North Little Rock, AR	106.6	2.8	23.3
Bakersfield, CA	37.0	0.5	22.9
Bishop, CA	30.0	2.5	0.3
Blue Canyon, CA	90.4	39.9	67.1
Eureka, CA	117.8	0.1	50.1
Fresno, CA	45.0	0.1	39.7
Long Beach, CA	32.2	0.0	44.7
Los Angeles, CA (CA International Airport)	35.7	0.0	38.7
Los Angeles, CA (CA Civic Center)	35.5	0.0	16.8
Redding, CA	74.3	1.5	12.5
Sacramento, CA	57.9	0.5	34.3
San Diego, CA	42.5	0.0	24.6
San Francisco, CA (CA International Airport)	62.4	0.5	15.2
San Francisco, CA (CA Mission Dolores)	67.7	0.0	[1] N/A
Santa Barbara, CA	31.4	0.0	19.3
Santa Maria, CA	46.1	0.0	86.7
Stockton, CA	51.8	0.0	43.0
Alamosa, CO	67.7	11.7	16.1
Colorado Springs, CO	89.6	12.3	21.1
Denver, CO	88.3	17.8	9.8
Grand Junction, CO	72.7	8.8	8.4
Pueblo, CO	69.6	9.5	8.2
Bridgeport, CT	116.8	7.4	29.5
Hartford, CT	126.5	12.6	28.7
Wilmington, DE	116.0	5.9	34.8
Washington, DC (National Airport)	111.4	4.7	10.5
Washington, DC (Dulles International Airport)	115.6	6.0	30.8
Apalachicola, FL	105.3	0.0	27.2
Daytona Beach, FL	114.2	0.0	28.2
Fort Myers, FL	112.2	0.0	20.5
Gainesville, FL	116.4	0.0	38.8
Jacksonville, FL	115.3	0.0	37.7
Key West, FL	108.9	0.0	1.0
Miami, FL	129.1	0.0	6.2
Orlando, FL	115.5	0.0	27.0
Pensacola, FL	109.6	0.1	35.3
Tallahassee, FL	115.8	0.0	50.0
Tampa, FL	106.8	0.0	21.9
Vero Beach, FL	121.2	0.0	14.8
West Palm Beach, FL	132.2	0.0	7.5
Athens, GA	109.9	0.9	38.8
Atlanta, GA	114.8	0.6	29.7
Augusta, GA	106.7	0.4	28.1
Columbus, GA	110.1	0.2	17.8
Macon, GA	110.1	0.4	24.5
Savannah, GA	110.9	0.1	39.2
Hilo, HI	278.3	0.0	0.0

TABLE 9.—SOLE COMMUNITY HOSPITAL-WEATHER DATA—Continued

NOAA weather station city/state	Average annual days of		
	Precipitation	Snow/ice	Fog
Honolulu, HI	99.5	0.0	0.0
Kahului, HI	97.4	0.0	0.0
Lihue, HI	201.3	0.0	0.0
Boise, ID	90.7	7.8	19.6
Lewiston, ID	102.9	5.4	21.1
Pocatello, ID	96.0	14.4	16.6
Chicago, IL (O'Hare International Airport)	126.2	12.0	14.4
Moline, IL	113.4	9.8	17.7
Peoria, IL	113.2	8.2	21.3
Rockford, IL	116.8	11.3	22.3
Springfield, IL	113.4	7.6	17.3
Evansville, IN	115.2	4.3	13.8
Fort Wayne, IN	131.0	10.0	19.4
Indianapolis, IN	124.9	7.8	20.0
So Bend, IN	143.6	23.1	23.1
Des Moines, IA	106.5	10.4	17.4
Dubuque, IA	116.1	13.9	28.1
Sioux City, IA	98.4	10.0	18.7
Waterloo, IA	100.8	10.0	20.4
Concordia, KS	88.3	7.5	16.9
Dodge City, KS	78.0	6.3	23.5
Goodland, KS	76.5	11.9	27.8
Topeka, KS	96.0	6.9	14.4
Wichita, KS	85.7	4.9	16.9
Jackson, KY	138.4	7.1	62.4
Lexington, KY	129.5	5.4	19.1
Louisville, KY	123.8	4.8	8.6
Paducah, KY	106.6	4.6	17.4
Baton Rouge, LA	108.5	0.1	35.8
Lake Charles, LA	100.0	0.1	49.9
New Orleans, LA	113.9	0.1	28.0
Shreveport, LA	96.8	0.6	19.4
Caribou, ME	160.1	29.6	26.9
Portland, ME	127.9	17.6	48.9
Baltimore, MD	112.3	6.6	25.8
Boston, MA	126.1	10.8	23.3
Milton, MA (Blue Hill Observatory)	133.8	15.4	[1] N/A
Worcester, MA	130.9	17.0	83.8
Alpena, MI	147.0	25.9	27.5
Detroit, MI (Metro Airport)	135.1	13.4	20.4
Flint, MI	133.4	14.4	18.2
Grand Rapids, MI	144.2	23.3	25.6
Houghton Lake, MI	143.0	25.4	28.9
Lansing, MI	140.4	16.0	21.1
Marquette Co. Airport, MI	169.1	46.6	29.0
Muskegon, MI	144.0	31.1	22.5
Sault Ste Marie, MI	165.8	37.0	43.6
Duluth, MN	134.0	21.7	53.1
International Falls, MN	131.1	18.9	15.3
Minneapolis-St. Paul, MN	114.2	14.9	10.8
Rochester, MN	117.8	14.5	32.3
Saint Cloud, MN	108.8	14.0	19.6
Jackson, MS	108.9	0.3	22.6
Meridian, MS	105.1	0.4	26.7
Tupelo, MS	103.3	1.9	18.1
Columbia, MO	110.4	7.7	22.3
Kansas City, MO (International Airport)	104.5	7.1	19.9
Kansas City, MO (Downtown Airport)	98.0	6.2	10.7
St. Louis, MO	110.5	6.4	11.6
Springfield, MO	107.9	5.4	20.6
Billings, MT	95.6	18.5	17.7
Glasgow, MT	89.5	8.9	13.1
Great Falls, MT	100.6	19.5	13.0
Helena, MT	95.4	14.1	8.0
Kalispell, MT	131.1	21.7	32.9
Miles City, MT	90.5	12.1	10.7
Missoula, MT	123.3	15.6	27.0
Grand Island, NE	86.4	9.4	17.4
Lincoln, NE	91.7	8.7	11.6

TABLE 9.—SOLE COMMUNITY HOSPITAL-WEATHER DATA—Continued

NOAA weather station city/state	Average annual days of		
	Precipitation	Snow/ice	Fog
Norfolk, NE	90.2	9.9	13.7
North Platte, NE	83.7	9.1	18.4
Omaha, NE (Eppley Airfield)	98.1	9.5	15.5
Omaha, NE (North)	100.2	9.8	16.2
Scottsbluff, NE	86.1	13.1	10.2
Valentine, NE	82.7	10.2	5.4
Elko, NV	78.8	14.5	5.8
Ely, NV	73.6	16.0	2.4
Las Vegas, NV	26.3	0.4	0.7
Reno, NV	50.8	8.2	7.2
Winnemucca, NV	68.9	8.7	4.5
Concord, NH	124.9	17.7	49.8
Gorham, NH (Mt. Washington Observatory)	209.2	69.0	314.1
Atlantic City, NJ (Pomona)	111.6	4.6	43.7
Atlantic City, NJ (State Marina)	110.4	[1] N/A	[1] N/A
Newark, NJ	121.2	7.3	17.0
Albuquerque, NM	60.7	4.2	5.6
Clayton, NM	68.0	7.7	10.9
Roswell, NM	55.9	4.6	16.0
Albany, NY	134.1	15.9	22.1
Binghamton, NY	161.3	23.7	52.5
Buffalo, NY	168.4	26.6	18.4
Islip, NY	116.0	8.0	36.8
New York City, NY (Central Park)	120.6	8.0	0.0
New York City, NY (JFK International Airport)	117.6	6.9	30.6
New York City, NY (LaGuardia Field)	118.3	6.9	23.6
Rochester, NY	157.8	27.4	12.4
Syracuse, NY	169.7	33.2	8.5
Asheville, NC	123.1	4.5	78.9
Cape Hatteras, NC	119.0	0.6	15.2
Charlotte, NC	110.6	1.7	26.3
Greensboro, NC	115.9	2.6	32.6
Raleigh, NC	110.8	2.3	34.6
Wilmington, NC	116.3	0.6	24.5
Bismark, ND	96.3	12.8	11.5
Fargo, ND	99.4	11.6	12.5
Williston, ND	92.5	12.5	9.5
Akron, OH	153.8	15.0	26.1
Cincinnati, OH (Greater Cincinnati Airport)	128.4	7.2	24.4
Cleveland, OH	155.8	18.2	12.5
Columbus, OH	136.6	9.3	16.0
Dayton, OH	131.6	8.8	22.2
Mansfield, OH	141.6	14.4	29.4
Toledo, OH	136.4	11.9	17.5
Youngstown, OH	159.9	18.5	28.6
Oklahoma City, OK	81.9	3.1	19.4
Tulsa, OK	89.5	3.5	10.3
Astoria, OR	192.3	1.5	41.5
Eugene, OR	136.9	2.1	59.5
Medford, OR	101.2	2.6	49.7
Pendleton, OR	99.1	6.1	30.3
Portland, OR	152.4	2.2	33.5
Salem, OR	147.1	2.1	37.5
Sexton, Summit, OR	126.4	27.3	159.3
Allentown, PA	124.3	9.0	26.2
Avoca, Wilkes-Barre, Scranton, PA	138.9	13.1	22.7
Erie, PA	164.0	26.0	13.2
Harrisburg, PA	124.1	9.4	18.7
Philadelphia, PA	116.4	5.9	22.3
Pittsburgh, PA (Greater Pittsburgh Airport)	153.6	13.3	17.8
Williamsport, PA	140.8	12.0	37.2
San Juan, PR	195.3	0.0	0.0
Block Island, RI	110.1	6.4	78.8
Providence, RI	123.5	10.0	24.9
Charleston, SC	112.4	0.2	28.0
Columbia, SC	108.2	0.5	27.3
Greenville-Spartanburg, SC	116.7	1.9	34.0
Aberdeen, SD	86.7	11.4	18.3
Huron, SD	92.4	12.0	14.8
Rapid City, SD	95.6	12.4	16.0
Sioux Falls, SD	96.8	11.1	21.5
Briston, Johnson City, Kingsport, TN	132.8	5.0	44.0
Chattanooga, TN	119.7	1.8	34.1
Knoxville, TN	126.0	3.8	31.3
Memphis, TN	105.9	1.9	10.4
Nashville, TN	118.5	3.7	17.4
Oak Ridge, TN	127.2	3.4	33.7
Abilene, TX	65.9	1.9	7.2
Amarillo, TX	69.5	4.9	26.7
Austin, TX	83.2	0.4	23.1
Brownsville, TX	72.6	0.0	27.2
Corpus Christi, TX	76.6	0.1	29.1
Dallas-Fort Worth, TX	77.9	1.2	11.3
Del Rio, TX	61.8	0.3	14.5
El Paso, TX	48.1	1.8	2.2
Galveston, TX	95.9	0.5	[1] N/A
Houston, TX	104.5	0.3	31.7
Lubbock, TX	62.5	3.4	17.5
Midland-Odessa, TX	51.5	1.9	15.5
Port Arthur, TX	104.1	0.1	38.8
San Angelo, TX	58.3	1.2	7.4
San Antonio, TX	81.3	0.2	22.0
Victoria, TX	89.0	0.1	40.3
Waco, TX	77.7	0.6	13.3
Wichita Falls, TX	70.8	2.2	12.2
Milford, UT	67.5	15.0	6.7
Salt Lake City, UT	90.4	18.0	11.5
Burlington, VT	153.6	22.1	15.2
Lynchburg, VA	118.7	5.4	39.0
Norfolk, VA	114.5	2.1	20.6
Richmond, VA	112.5	3.9	27.6
Roanoke, VA	118.5	6.5	23.7
Olympia, WA	162.7	5.4	90.3
Quillayute Airport, WA	210.6	4.7	52.8
Seattle, WA (Seattle-Tacoma Airport)	155.8	4.0	43.6
Seattle, WA (Urban Climatology Station)	151.3	2.4	[1] N/A
Spokane, WA	113.0	17.2	48.7
Stampede Pass, WA	201.8	85.6	252.2
Yakima, WA	68.9	8.1	18.6
Berkley, WV	158.8	19.7	48.4
Charleston, WV	150.9	10.3	102.7
Elkins, WV	170.2	24.2	82.8
Huntington, WV	139.3	8.2	62.2
Green Bay, WI	120.7	14.7	24.5
La Crosse, WI	110.4	12.7	19.6
Madison, WI	118.6	12.9	22.1
Milwaukee, WI	125.0	13.5	26.2
Casper, WY	95.1	24.7	9.0
Cheyenne, WY	98.5	16.7	23.2
Lander, WY	71.7	24.3	4.0
Sheridan, WY	106.7	23.4	5.7

[1] N/A means not available.

Appendix A—Regulatory Impact Analysis

I. Introduction

Executive Order (E.O.) 12291 requires us to prepare and publish a regulatory impact analysis for any final rule that meets one of the E.O. 12291 criteria for a "major rule;" that is, a rule that will be likely to result in—

- An annual effect on the economy of $100 million or more;
- A major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; or
- A significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

In addition, we generally prepare a regulatory flexibility analysis that is consistent with the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 through 612), unless the Secretary certifies that a final rule will not have a significant economic impact on a substantial number of small entities. For purposes of the RFA, we consider all hospitals to be small entities.

Also, section 1102(b) of the Act requires the Secretary to prepare a regulatory impact analysis for any final rule that will have a significant impact on the operations of a substantial number of small rural hospitals. Such an analysis must conform to the provisions of section 604 of the RFA. With the exception of hospitals located in certain rural counties adjacent to urban areas and hospitals located in certain New England counties, for purposes of section 1102(b) of the Act, we define a small rural hospital as a hospital with fewer than 50 beds located outside of a Metropolitan Statistical Area or New England County Metropolitan Area. (Section 1886(d)(8)(B) of the Act specifies that hospitals located in certain rural counties adjacent to one or more urban areas are deemed to be located in an adjacent urban area. We have identified 54 rural hospitals, some of which may be considered small, that we have reclassified as urban hospitals. Also, section 601(g) of the Social Security Amendments of 1983 (Pub. L. 98-21) designated hospitals in certain New England counties as belonging to the adjacent New England Metropolitan County. Thus, for purposes of the prospective payment system, we also reclassified these hospitals as urban hospitals.)

It is clear that the changes being implemented in this document will affect both a substantial number of small rural hospitals as well as other classes of hospitals, and the effects on some may be significant. Therefore, the discussion below, in combination with the rest of this final rule, constitutes a combined regulatory impact analysis, regulatory flexibility analysis, and rural hospital impact statement in accordance with E.O. 12291, the RFA, and section 1102(b) of the Act.

Since we have not significantly altered our final policy from the proposed, the impact of this final rule will be virtually identical to the impact presented in our initial analysis. The only differences in this final analysis from the initial impact analysis are to reflect the availability of more recent data since publication of the proposed rule (including corrected wage survey data), and the receipt of public comments directed specifically at the initial impact analysis. Thus, the following analysis revises those portions of

the initial impact analysis that are affected by the availability of more recent and complete data and responds to the three comments that concerned the impact analysis.

II. Impact on Excluded Hospitals and Units

Approximately 990 Medicare hospitals and 1,750 units in hospitals included in the prospective payment system currently are paid on a reasonable cost basis subject to the rate-of-increase ceiling requirement of § 413.40. For cost reporting periods beginning in FY 1991, these hospitals will have their individual target amounts increased by the percentage increase in the market basket applicable to excluded hospitals. The hospital market basket increase will be 5.3 percent for excluded hospitals and units.

The effect this will have on affected hospitals and units will vary depending on each hospital's or unit's existing relationship of costs per discharge to its target amount, and the relative gains in productivity (efficiency) the hospital or unit is able to achieve. For hospitals and units that incur per discharge costs lower than their target amounts, the primary impact will be on the level of incentive payments made under § 413.40(d). A hospital may receive incentive payments for incurring costs that are lower than its target amount, but may not receive payments for costs that exceed the target amount. We expect the increased ceiling on payment will maintain existing incentives for economy and efficiency experienced by excluded hospitals and units.

III. Effects on Sole Community Hospitals (SCHs) and Medicare-Dependent, Small Rural Hospitals (MDHs)

Section 6003(e) of Public Law 101-239 revised the payment methodology for hospitals classified as SCHs effective with hospital cost reporting periods beginning on or after April 1, 1990. As of that date, as provided in section 1886(d)(5)(D)(i) of the Act, SCHs will be paid based on whichever of the following rates yields the highest aggregate payment for the cost reporting period:

- The Federal rate applicable to the hospital;
- The updated hospital-specific rate based on FY 1982 cost per discharge; or
- The updated hospital-specific rate based on FY 1987 cost per discharge.

In a similar provision, section 6003(f) of Public Law 101-239, which added a new section 1886(d)(5)(G) of the Act, creates a new category of hospitals eligible for a special payment adjustment under the prospective payment system. The adjustment is limited to Medicare-dependent small rural hospitals and is effective for cost reporting periods beginning on or after April 1, 1990 and ending on or before March 31, 1993. Section 6003(f) of Public Law 101-239 provides Medicare-dependent small rural hospitals the same payment options afforded to sole community hospitals under section 6003(e) of Public Law 101-239. The criteria for being classified as a Medicare-dependent small rural hospital is discussed in the April 20, 1990 final rule with comment (55 FR 15154).

In our analysis, we assume that the fiscal year for every Medicare-dependent small rural hospital and sole community hospital is the same as the Federal fiscal year. To determine the effect of the final policy changes on these hospitals, we first compared payment amounts based on the hospital-specific rates (using the higher of the updated FY 1982 and FY 1987 base period costs) to the total projected amounts the hospital will receive based on the final FY 1991 national standardized payment amount. We then compared the projected amounts the hospital will receive under the FY 1991 payment alternative that will yield the highest aggregate payments to the projected amounts the hospital will receive under the payment alternative that will yield the highest aggregate payments using payment rules that were effective April 1, 1990.

Below, we show percentages for each of the three payment methodologies provided for in the law, based on FY 1991 payment rules, which will produce the highest payment for each of the Medicare-dependent small rural hospitals for which we have cost report data.

- 24 percent of the identifiable Medicare-dependent, small rural hospitals will be paid a hospital-specific rate based on their FY 1982 cost reporting period.
- 20 percent of the hospitals will be paid a hospital-specific rate based on their FY 1987 cost reporting period.
- 56 percent of the hospitals will be paid the Federal national payment rate. This represents a 4 percentage point increase in the percentage of hospitals paid the Federal rate compared to those paid the Federal rate under the payment rules effective for cost reporting periods beginning April 1, 1990.

We made similar determinations for all sole community hospitals (including sole community hospitals that are also rural referral centers) concerning which method of payment will result in the highest payment for each hospital. Using the available cost report data, we determined that—

- 34 percent of all sole community hospitals will be paid a hospital-specific rate based on their FY 1982 cost reporting period;
- 22 percent of all sole community hospitals will be paid a hospital-specific rate based on their FY 1987 cost reporting period; and
- 43 percent will be paid the Federal national payment rate. This represents a 6 percentage point increase in the percentage of hospitals paid the Federal rate compared to those paid the Federal rate under the payment rules effective for cost reporting periods beginning April 1, 1990.

IV. Offset for Physician Assistant Services

As discussed in section VI.F. of the preamble, section 9338(d) of Public Law 99-509 allows the Secretary to reduce the amount of Medicare payments made to hospitals in order to eliminate estimated duplicate payments attributable to physician assistant services described in section 1861(s)(2)(K)(i) of the Act.

In the proposed rule, we proposed to amend the regulations at § 412.120 to provide for an offset to DRG payments for 100 percent of the reasonable charges attributable to any services performed by physician assistants on or after October 1, 1990 in portions of the hospital subject to the prospective payment system. In this final rule, we are amending the regulations to provide for an offset only for services performed by a physician assistant who is paid by the hospital.

We anticipate that this offset will result in the following savings:

Table 1.—Projected Medicare savings—offset for physician assistant services [1]

Fiscal year 1991	$5
Fiscal year 1992	$10
Fiscal year 1993	$10
Fiscal year 1994	$10
Fiscal year 1995	$10

[1] Rounded to the nearest $5 million.

V. Quantitative Impact Analysis of the Final Policy Changes on Prospective Payment Hospitals

A. Basis and Methodology of Estimates

The data used in developing the following quantitative analysis of changes in payments, presented in Table II below, are taken from FY 1989 billing data and hospital-specific data for FY 1987 and FY 1988. As in previous analyses, we propose to compare the effects of changes being implemented in this document for FY 1991 to our estimate of the payment amounts in effect for FY 1990.

In addition, we have treated all hospitals in our data base as if they have cost reporting periods that coincide with the Federal fiscal year. By establishing the same cost reporting period for all hospitals, we can show the effect of policy changes on payments for comparable 12-month periods. Moreover, our analysis does not take into account any behavioral changes hospitals may adopt in response to the final policy changes being set forth in this document.

The tables and the discussion that follow reflect our best effort to identify and quantify the effects of the final changes being set forth in this document. It should be noted, however, that as a result of gaps in our data, we are unable to quantify some of the effects of this final rule. Also, we could not utilize all the hospitals in the DRG recalibration or outlier data sets for modeling the impact analysis because in some cases the hospital-specific data necessary for constructing our impact model were missing. Data on hospital bed size and type of control were the data elements most frequently missing. The absent data prevented us from properly classifying and displaying these hospitals in the impact analysis. The missing data, however, did not prevent us from using the discharges from these hospitals in recalibrating the DRG weights or calculating the final outlier payments that are included in the final column of Table II showing the combined effects of all implemented changes.

Our ability to quantify the impacts of the implemented changes has been made more problematic this year by the need to account for the expanded inpatient hospital benefits available under the Medicare Catastrophic Coverage Act that are reflected in the FY 1989 billing data for discharges occurring on or after January 1, 1989. Since the expanded

benefits were repealed effective for discharges occurring on or after January 1, 1990, we have removed an estimate of the additional outlier payments attributable to the catastrophic benefits from our baseline data before analyzing the impact of the changes being implemented.

The following analysis examines separately the elimination of the regional floor and the rebasing and revising of the hospital market basket, wage index changes, and DRG reclassification and recalibration. That is, all variables except those associated with the provision under examination were held constant so as to display the effects of each provision compared to the baseline (FY 1989) provisions. In the last column (column V), we present the combined effect of all changes being implemented in this rule. That is, column V displays the combined effects of the previous four columns as well as the FY 1991 update factor and the updating of the outlier payment thresholds. As such, this last column is the only one in which the effects of all the quantifiable payment policy changes on simulated FY 1991 payments are reflected.

The following discussion is divided into two parts. The first part describes the individual effects of four major changes being implemented in this document: elimination of the regional floor; the rebasing and revising of the hospital market basket; the annual changes to the DRG classification system and recalibration of the DRG weights required under section 1886(d)(4)(C) of the Act; and replacement of the current wage index based on 1984 wage data with a wage index based on 1988 wage data discussed in section III.C. of the preamble. Columns I–IV of Table II reflect the quantitative impact of each change by various categories of hospitals. The second section discusses the combined effect of all provisions being implemented in this rule and references column V of Table II.

Comment: One commenter expressed concern about the impact that psychiatric residency programs would experience as a result of HCFA's proposal to replace the one day counting methodology with a full year counting methodology for determining the number of FTE interns and residents in prospective payment hospital inpatient settings and outpatient departments. In addition, they requested a more detailed impact analysis including an analysis of the additional administrative costs associated with the increased recordkeeping that the full year counting methodology would entail.

Response: If the one day counting methodology has been implemented correctly by hospitals, the difference in the total number of FTEs that are counted based on the one-day count and the revised methodology should be negligible. Thus, there will be virtually no impact on hospitals in general. Due to lack of data, we are unable to estimate the additional administrative costs associated with the change in the counting methodology. However, we note that with the exception of documentation supporting the amount of time residents worked in either a part of the hospital subject to the prospective payment system or in an outpatient department, the revised methodology does not pose additional reporting requirements to those required for the GME count. Hospitals will have additional time to make those administrative changes necessary to accommodate this new counting methodology, since we are delaying implementation of this provision until July 1, 1991.

Comment: One commenter suggested that we had incorrectly asserted that the impact for the proposed revision of the counting methodology for determining the number of FTE interns and residents in prospective payment hospital inpatient settings and outpatient departments for purposes of computing the IME adjustment was negligible.

Response: We believe that, on average, the impact of the revision in the method of computing the FTE count for purposes of the IME adjustment will be negligible. However, that is not to say that individual hospitals may not be disproportionately affected because of inconsistencies in their implementation of the one-day count; that is, the one-day count was not representative of the average FTE count for the hospital's cost reporting period.

Comment: We received one comment urging that the impact statement analyze operating margins rather than changes in the level of payment resulting from changes in the regulation.

Response: We responded previously to a similar comment (54 FR 36583, September 1, 1989). Because it is anticipated that changes in the regulations will result in changes in hospital behavior, we do not believe that it is possible to predict with any degree of accuracy what the impact of regulations will be on operating margins.

TABLE II.—IMPACT OF THE FINAL CHANGES IN THE PROSPECTIVE PAYMENT SYSTEM FOR FY 1991

	Number of hospitals [1]	Col I, Labor share change	Col II, Wage index changes [2]	Col III, Reclassification and recalibration [3]	Col IV, Elimination of regional floor	Col V, All changes [4]
All Hospitals	5,546	0.0	0.0	0.0	−0.2	5.1
Urban by Region						
New England	178	−0.2	5.4	−0.2	−0.7	9.8
Middle Atlantic	475	−0.6	1.3	0.8	0.0	6.9
South Atlantic	438	0.4	2.0	−0.2	0.0	7.5
East North Central	524	0.1	−1.5	0.2	−1.0	3.0
East South Central	173	0.6	−0.7	0.1	0.0	5.3
West North Central	193	0.2	−3.5	0.1	0.0	2.0
West South Central	361	0.5	−2.3	0.1	0.0	3.5
Mountain	117	0.3	−1.1	−0.2	0.0	4.3
Pacific	505	−0.2	−0.1	−0.2	0.0	4.7
Puerto Rico	51	1.2	−4.2	0.12	0.0	2.0
Rural by Region						
New England	60	0.2	3.7	−0.7	−0.9	6.8
Middle Atlantic	90	0.0	1.0	−0.4	−0.5	5.3
South Atlantic	334	0.3	2.1	−0.7	0.0	7.0
East North Central	324	0.2	−1.5	−0.9	−0.7	2.2
East South Central	301	0.5	−0.6	−0.8	0.0	4.4
West North Central	574	0.2	−3.4	−1.0	0.0	0.9
West South Central	408	0.4	−1.4	−0.9	0.0	3.2
Mountain	246	0.1	0.5	−0.9	0.0	4.8
Pacific	159	−0.2	−1.3	−0.9	0.0	2.8
Puerto Rico	6	2.0	−8.9	−1.2	0.0	−3.5
Large Urban Areas (population over 1 million)	1,507	−0.2	0.4	0.3	−0.2	5.6
Other Urban Areas (population of 1 million or fewer)	1,526	0.3	−0.3	0.0	−0.2	5.0
Urban Hospitals	3,033	0.0	0.1	0.1	−0.2	5.3
0–99 Beds	662	−0.1	−0.3	−0.8	−0.2	3.9
100–199 Beds	779	0.0	0.3	−0.5	−0.1	5.0

TABLE II.—IMPACT OF THE FINAL CHANGES IN THE PROSPECTIVE PAYMENT SYSTEM FOR FY 1991—Continued

	Number of hospitals [1]	Col I, Labor share change	Col II, Wage index changes [2]	Col III, Reclassification and recalibration [3]	Col IV, Elimination of regional floor	Col V, All changes [4]
200–299 Beds	597	0.0	0.0	−0.1	−0.2	5.1
300–399 Beds	642	0.0	0.1	0.1	−0.2	5.3
400+ Beds	292	0.0	0.1	0.7	−0.2	5.9
Rural Hospitals	2,513	0.3	−0.4	−0.8	−0.2	4.0
0–49 Beds	1,023	−0.1	−1.1	−1.1	−0.1	2.7
50–99 Beds	812	0.0	−0.5	−1.1	−0.2	3.3
100–149 Beds	363	0.2	−0.5	−1.0	−0.2	3.7
150–199 Beds	147	0.4	−0.1	−0.8	−0.2	4.6
200+ Beds	146	0.7	−0.2	−0.3	−0.2	5.2
Teaching Status						
Nonteaching	4,356	0.1	0.0	−0.5	−0.2	4.7
Resident/Bed Ratio						
Less than 0.25	963	0.1	−0.4	0.2	−0.3	4.9
Resident/Bed Ratio						
0.25 or Greater	227	−0.3	0.9	1.2	−0.3	6.9
Disproportionate Share Hospitals (DSH)						
Non-DSH	3,987	0.1	−0.1	−0.3	−0.3	4.7
Urban DSH						
100 Beds or More	1,149	−0.1	0.1	0.5	−0.2	5.7
Fewer Than 100 Beds	80	0.0	−0.5	0.1	0.0	4.9
Rural DSH						
100 Beds or More—not Rural Referral Centers or Sole Community Hospitals	80	0.2	0.2	−0.7	0.0	4.7
Fewer Than 100 Beds not Rural Referral Centers or Sole Community Hospitals	164	0.2	0.1	−1.2	0.0	4.1
Sole Community Hospitals	49	0.0	0.1	−0.8	−0.1	4.3
Rural Referral Centers and Sole Community Hospitals or Rural Referral Centers	37	0.9	0.1	−0.2	0.0	6.0
Urban Teaching and DSH						
Both Teaching and DSH	609	−0.1	0.0	0.8	−0.2	5.8
Teaching only	498	0.1	0.0	0.1	−0.3	5.1
DSH only	620	0.1	0.4	−0.3	−0.1	5.4
Nonteaching and Non-DSH	1,306	0.1	0.1	−0.5	−0.2	4.8
Other Special Status (rural)						
Sole Community Hospitals (SCHs)	382	0.0	−0.3	−1.0	−0.1	3.7
Rural Referral Centers (RRCs)	217	0.8	−0.4	−0.4	−0.2	5.0
Sole Community & Rural Referral	27	0.5	0.8	−0.6	−0.2	5.4
Medicare-Dependent	557	0.0	−1.0	−1.2	−0.1	2.9
Type of Ownership						
Voluntary	3,050	0.0	0.0	0.0	−0.3	5.1
Proprietary	873	0.3	0.2	−0.4	0.0	5.3
Government	1,532	0.1	−0.1	0.1	−0.1	5.3
Medicare Utilization as Percent of Inpatient Days						
0–25	373	−0.2	−0.6	1.3	−0.1	5.6
25–50	2,932	0.1	−0.1	0.1	−0.2	5.1
50–65	1,695	0.0	0.2	−0.4	−0.2	4.9
Over 65	396	0.1	1.2	−0.7	−0.1	5.8

[1] Because data necessary to classify some hospitals by category were missing, some hospitals were omitted from the analysis. Therefore, the total number of hospitals in each category may not equal the national total.

[2] The final wage index constricted entirely from 1988 hourly wage data was compared to the current wage index which is based entirely on 1984 hourly wage data. The final wage index also reflects changes required by section 1884(d)(8)(C) of the Act concerning the redesignation of certain rural hospitals as urban.

[3] Recalibration of the DRG weights and classification changes are based on FY 1989 MEDPAR data and are performed annually in accordance with section 1886(d)(4)(C) of the Act.

[4] This column shows the combined effects of all the previous columns as well as the effects of updating the FY 1990 standardized payment amounts by the market basket increase as mandated by section 1886(b)(3)(B)(i) of the Act. For the comparative effects of updating the FY 1990 standardized amounts by the update factors we are proposing to recommend to the Congress as required by Section 1886(e)(4) of the Act, see Appendix D to this document. Also, FY 1990 baseline payments reflect an estimate of outlier payments at 5.0 percent in contrast to the 5.1 percent set for the outlier pool. These estimates of outlier payments contain an adjustment to remove the effects of the elimination of the day limitation on inpatient hospital services under Pub. L. 100–360. Because our total FY 1991 estimated payments do not perpetuate this 0.1 percentage point decrease in outlier payments relative to the outlier pool, this column reflects the 0.1 percent increase in total prospective payments necessary to ensure equality between projected outlier payments and the outlier offsets. In addition, this column captures interactive effects that we are not able to quantify.

B. Individual Effects

1. *Change in the Labor/Nonlabor Shares of the Hospital Market Basket.* Column I shows the effect of the change in the labor/nonlabor shares of the hospital market basket. As explained in section V.B of the preamble, we are using a revised hospital input price index (that is, hospital market basket) in developing the FY 1991 update factor for the prospective payment rates. The market basket will be revised as follows:

• We will rebase to reflect 1987, rather than 1982, cost data.

• We will modify certain variables used as the price proxies for some of the cost categories.

In connection with the rebasing of the hospital input price index we have, under the authority of sections 1886 (d)(2)(H) and (d)(3)(E) of the Act, re-estimated the labor-

related share of the standardized amounts. Based on the cost weights described in Table 2 of section IV of the addendum to this rule, the labor-related share that is subject to hospital wage index adjustments (based on wages and salaries, employee benefits, professional fees, business services, computer and data processing blood services, postage and all other labor-intensive services) is 71.40 percent and the nonlabor-related share is 28.60 percent. Previously, the labor share was 74.39 percent and the nonlabor share was 25.61 percent.

We have recomputed the standardized amounts based on the revised labor market share. Nationally, the labor share change has no effect on aggregate payments. Large urban areas, which tend to have a wage index value greater than 1.0, will experience a 0.2 percent reduction in payments. Both other urban hospitals and rural hospitals will experience increases of 0.3 percent respectively.

The effect on hospitals in different urban areas varies from a 1.2 percent increase in payments for hospitals in the urban areas of Puerto Rico to a 0.6 percent reduction in payments for hospitals in the urban areas of the middle Atlantic census division. This 0.6 percent reduction represents the largest decrease across all hospital categories. The labor share change will increase payments in seven of the ten urban census divisions, and decrease payments in three census divisions.

The effect of the labor share change on rural hospitals ranges from a 2.0 percent increase for hospitals in Puerto Rico to a 0.2 percent reduction in payments for hospitals in the Pacific census division. The 2.0 percent increase in payments to Puerto Rico rural hospitals represents the largest increase across all hospital categories. Nine of the ten rural census divisions will experience an increase in payments. Among rural hospitals, the increase in payments is concentrated in the larger bed size categories and among rural referral centers.

2. *Wage Index.* Column II of Table II displays the estimated effects of changes to the wage index being implemented in this final rule. As discussed in section IV.B of this preamble, section 1886(d)(3)(E) of the Act, (as amended by section 6003(h)(6) of Pub. L. 101-239) requires that wage indexes be updated not later than October 1, 1990 and annually beginning October 1, 1993.

Therefore, we will base the FY 1991 wage index entirely on the 1988 wage survey described under section IV.B of this preamble. This wage index will reflect total hospital salaries and hours, excluding salaries and hours associated with skilled nursing facility or other nonhospital cost centers, and including home office salaries and hours, and fringe benefits for all included salaries. The exclusion of nonhospital costs and the inclusion of home office costs and fringe benefits represents a change from the FY 1990 hospital wage index.

Since wide swings were noted for some geographical areas between the current and the final area wage indexes, we will implement a 1-year phase-in of the updated wage index for FY 1991 by limiting the percentage change in the final wage index compared to the current wage index. As of FY 1992, the actual area wage index value will be used. As discussed in section IV.E of this preamble, the phase-in provides that the effect of the change from the current wage index to the final wage index will be mitigated by a formula which uses a 8.00 percent change as the base and adds 50 percent of the remaining difference between the actual impact of the wage index and the 8.00 percent threshold to obtain the area wage index values for the affected areas.

Nationally, as a result of budget neutrality, the wage index change has no measurable effect on aggregate program payments. Overall, payments to large urban hospitals will increase by 0.4 percent. Payments to other urban hospitals and to rural hospitals will decrease by 0.3 percent and 0.4 percent, respectively.

The effect on hospitals in geographical areas varies from an average 5.4 percent increase in payments for hospitals in the urban areas of the New England census division to a 4.2 percent reduction in payments for hospitals in the urban areas of Puerto Rico. The 5.4 percent increase in payments to New England urban hospitals represents the largest increase across all hospital categories. Seven of the ten urban census regions will experience reductions in payments.

The range for rural hospitals is from a 3.7 percent increase for hospitals located in the New England census division to a 8.9 percent reduction in payments for hospitals located in the Puerto Rico census division. The 8.9 percent reduction in payments to Puerto Rico rural hospitals represents the largest percentage reduction across all hospital categories. Six of the ten rural census divisions will experience reductions in payment.

All rural hospitals as categorized by bed size will experience reductions in payments. These reductions range from 1.1 percent (0–49 beds) to 0.1 percent (150–200 beds). Two rural hospital bed size categories will experience 0.5 percent reductions in payments: 50 to 99 beds and 100–149 beds.

The effect on hospitals categorized by type of ownership varies from a 0.1 percent reduction in payments for government owned hospitals to a 0.2 percent increase in payments for proprietary hospitals.

The range for the effect of the wage index change on hospitals categorized by Medicare utilization as a percent of inpatient days is from a 0.6 percent reduction in payments for hospitals with Medicare utilization of 0–25 percent to a 1.2 percent increase in payments for hospitals with Medicare utilization of over 65 percent.

Rural hospitals subject to special payment provisions will experience reductions in payment ranging from 0.3 percent (sole community hospitals) to 1.0 percent (Medicare-dependent hospitals). The only exception to these reductions is those rural hospitals classified as both a solely community hospital and rural referral center. These hospitals will experience an 0.8 percent increase in payments.

3. *Revising the DRG Classification System and Recalibration of the DRG Weights.* In Column III, we present the combined effects of revising the current DRG definitions and recalibrating the weights to reflect changes in treatment patterns, technology and any other factors that may change the relative use of hospital resources as required each year by section 1886(d)(4)(C) of the Act. These changes are described in section III.B of the preamble to this final rule. In the following analysis, we compared estimated FY 1991 hospital payments using an estimate of each hospital's case-mix index based on the final FY 1991 DRG classifications and weighting factors to FY 1991 simulated payments using an estimate of each hospital's case-mix index based on the implemented DRG classifications and recalibrated weighting factors.

We are using the same basic methodology for the FY 1991 recalibration as we did for FY 1990. That is, we will recalibrate the weights based on charge data for Medicare discharges. However, we will use the most current charge information available, which is the FY 1989 MEDPAR file.

Section 6003(b) of Public Law 101-239 requires that reclassification and recalibration changes beginning with FY 1991 be made in a manner that assures that the aggregate payments are not greater or less than the aggregate payments that will have been made without the changes. Nationally, as a result of budget neutrality, the DRG recalibration change has no aggregate effect on program payments. The changes will increase payments to large urban hospitals by 0.3 percent, have no measurable effect on payments to other urban hospitals, and will reduce payments to rural hospitals by 0.8 percent.

The effect on hospitals in different geographic areas varies from an average 0.8 percent increase in payments for hospitals in the urban areas of the Middle Atlantic census division to a 0.2 percent reduction in payments for hospitals in the urban areas of the New England, South Atlantic, Mountain, and Pacific census divisions. Five of the ten urban census divisions will experience an increase in payments.

In contrast, rural hospitals in all ten census divisions will experience reductions in payment. These payment reductions range from 0.4 percent in the Middle Atlantic census division to 1.2 percent in the Puerto Rico census division.

In addition to rural Puerto Rico hospitals, rural disproportionate share hospitals with fewer than 100 beds that are not classified as rural referral centers or sole community hospitals and Medicare-dependent hospitals will have a 1.2 percent reduction in payments. These are the largest percentage decreases in payments due to DRG recalibration changes across all hospital categories. The largest increase in payments is found in those hospitals categorized as having less than 25 percent Medicare utilization as a percent of inpatient days. These hospitals will experience a 1.3 percent increase in payments. Major teaching hospitals will experience a 1.2 percent increase.

Recalibration tends to increase payments to larger hospitals. The effect on urban hospitals categorized by bed size varies from an average 0.7 percent increase in payments to hospitals with over 500 beds to a 0.8

percent reduction in payments to hospitals with 0–99 beds.

All rural hospitals categorized by bed size will experience reductions in payments ranging from 0.3 to 1.1 percent. The 1.1 percent reduction in payments will be experienced by hospitals whose bed sizes are 0–49 and 50–99 and the 0.3 percent reduction will be experienced by hospitals with more than 200 beds.

4. *Elimination of the Regional Floor.* Column IV shows the effect of the elimination of the regional floor. Section 4002(d) of Public Law 100–203 amended section 1886(d)(1)(A)(iii) of the Act to establish a "regional floor" for the prospective payment rate applicable to a hospital effective for discharges occurring on or after April 1, 1988 and before October 1, 1990. In accordance with this section, hospital payments have been based on the greater of the national average standardized amount or the sum of 85 percent of the national average standardized amount and 15 percent of the average standardized amount for the Census region in which they are located. Because the statutory authority for use of the regional floor expires on October 1, 1990, we will discontinue its use effective with discharges occurring on or after October 1, 1990.

In FY 1990, the regional floor is applicable to urban hospitals located in the New England, East North Central and East South Central census divisions and to rural hospitals located in the New England, Middle Atlantic, and East North Central census divisions. Therefore, the elimination of the regional floor will have an impact on these geographic areas only.

Nationally, the elimination of the regional floor will result in a 0.2 percent reduction in payments. It will result in a 0.2 percent reduction in payments to large urban and other urban hospitals and rural hospitals.

The effect on urban hospitals in affected geographic areas varies from a 1.0 percent reduction in payments to hospitals in the urban areas of the East North Central census division to a 0.7 percent reduction for urban hospitals in the New England census division.

The range for affected rural hospitals is from a 0.9 percent reduction in payments to hospitals in the rural areas of the New England census division to a 0.5 percent reduction for hospitals in the Middle Atlantic census division.

The 1.0 percent reduction in payment to hospitals in the East North Central urban census division represents the largest reduction in payments across all hospital categories.

D. *Combined Effects.* Column V of Table II shows the FY 1991 rates that incorporate the combined effects of all the final changes we are able to quantify. In addition to the changes described in columns I, II, III, and IV, column V shows the effects of updating the FY 1990 standardized payment amounts by the market basket increase as mandated by section 1886(b)(3)(B)(i) of the Act. The market basket increase is estimated at 5.2 percent.

Because Column V combines the final FY 1991 payment rates and all other final changes, the effects displayed also include the payment offset for outlier payments required under section 1886(d)(5)(A) of the Act. Section 1886(d)(3)(B) of the Act requires that the urban and rural standardized amounts be separately reduced by the proportion of estimated total DRG payments attributable to estimated outlier payments for hospitals located in urban areas and those located in rural areas. Section 1886(d)(9)(B)(iv) of the Act requires that the urban and rural standardized amounts be reduced by the proportion of estimated total payments made to hospitals in Puerto Rico attributable to estimated outlier payments.

We have set the outlier thresholds so as to result in estimated outlier payments equal to 5.1 percent of total prospective payments. The model that we use to determine the outlier thresholds necessary to target our desired outlier pool for FY 1991 employs FY 1989 charges. We are adjusting that model to take into account the effect of changes in Medicare coverage for inpatient hospital services during FY 1989 that resulted from the enactment of the Catastrophic Coverage Act of 1988 (Pub. L. 100–360). These catastrophic coverage provisions were effective with discharges occurring on or after January 1, 1989 (the second quarter of FY 1989) and were repealed by the Medicare Catastrophic Coverage Act of 1989 (Pub. L. 101–234) effective for discharges occurring on or after January 1, 1990.

Nationally, the effects of all changes we are implementing are expected to result in a 5.1 percent payment increase. These changes will increase payments to large urban hospitals by 5.6 percent, to other urban hospitals by 5.0 percent, and to rural hospitals by 4.0 percent. All categories of hospitals, with the exception of rural hospitals in the Puerto Rico census division will experience increases in payments. The percentage increases range between 0.9 and 9.8 percent.

The effect on hospitals in different urban areas varies from an average 9.8 percent increase in payments for hospitals in the urban areas of the New England census division to a 2.0 percent increase in payments for hospitals in the urban areas of the West North Central and Puerto Rico census divisions. The 9.8 percent increase respresents the largest increase across all hospital categories and is attributable to the wage index change.

The effect of all changes on rural hospitals varies from an average 7.0 percent increase for hospitals in the South Atlantic census division to hospitals in the West North Central census division that will receive an average 0.9 percent increase in payments. However, rural hospitals in Puerto Rico will experience an average 3.5 percent reduction in payments. This 3.5 percent reduction represents the largest reduction across all hospital categories and is largely explained by the wage index change.

Urban hospitals as categorized by bed size will receive increases in payments ranging from 3.9 to 5.9 percent. The increase in payments to rural hospitals as categorized by bed size will range from 2.7 to 5.2 percent. For both urban and rural hospitals as the number of beds increase, the percentage increase in payments becomes larger.

The increase in payments that will be experienced by hospitals categorized by type of ownership is near the national average, ranging from a 5.1 percent increase in payments for voluntary hospitals to a 5.3 percent increase in payments for proprietary and government hospitals. Hospitals categorized as other special status rural will receive increases in payments below the national average of 5.1 percent with the exception of those rural hospitals categorized as sole community and rural referral center hospitals. Those hospitals will receive increases in payments of 5.4 percent.

We must point out that there are interactions that result from the combining of the various separate provisions analyzed in the previous columns that we are unable to isolate. Thus, the values appearing in column V do not represent merely the additive effects of the previous columns plus the update factors.

Table III presents the projected FY 1991 average payments per case for urban and rural hospitals and for the different categories of hospitals shown in Table II, and compares them to the average estimated per case payments for FY 1990. As such, this table presents the combined effects of the implemented changes presented in Table II in terms of the average dollar amounts paid per discharge. That is, the percentage change in average payments from FY 1990 to FY 1991 equals the percentage changes shown in the last column of Table II.

TABLE III.—COMPARISION OF PAYMENT PER CASE (FY 1991 COMPARED TO FY 1990)

	Number of hospitals	Col. I: Average FY 1990 payment per case	Col. II: Average FY 1991 payment per case	Col. III: Percentage change [1]
All hospitals	5,546	$4,984	$5,240	5.1
Urban by region:				
New England	178	5,601	6,147	9.8
Middle Atlantic	475	5,942	6,350	6.9
South Atlantic	438	5,001	5,378	7.5
East North Central	524	5,328	5,488	3.0

TABLE III.—COMPARISION OF PAYMENT PER CASE (FY 1991 COMPARED TO FY 1990)—Continued

	Number of hospitals	Col. I: Average FY 1990 payment per case	Col. II: Average FY 1991 payment per case	Col. III: Percentage change [1]
East South Central	173	4,663	4,908	5.3
West North Central	193	5,454	5,561	2.0
West South Central	361	5,030	5,207	3.5
Mountain	117	5,368	5,600	4.3
Pacific	505	6,297	6,595	4.7
Pureto Rico	51	2,190	2,232	2.0
Rural by region:				
New England	60	4,007	4,282	6.8
Middle Atlantic	90	3,679	3,874	5.3
South Atlantic	334	3,301	3,532	7.0
East North Central	324	3,315	3,387	2.2
East South Central	301	2,913	3,040	4.4
West North Central	574	3,122	3,151	0.9
West South Central	408	3,011	3,108	3.2
Mountain	246	3,500	3,666	4.8
Pacific	159	4,034	4,146	2.8
Puerto Rico	6	1,537	1,483	−3.5
Large urban areas (populations over 1 million)	1,507	5,937	6,270	5.6
Other urban areas (populations with 1 million or fewer)	1,526	4,937	5,182	5.0
Urban hospitals	3,033	5,445	5,734	5.3
0–99 beds	662	4,042	4,198	3.9
100–199 beds	779	4,650	4,881	5.0
200–299 beds	597	5,043	5,298	5.1
300–399 beds	642	5,506	5,797	5.3
400+beds	292	6,571	6,956	5.9
Rural hospitals	2,513	3,267	3,398	4.0
0–49 beds	1,023	3,837	2,913	2.7
50–99 beds	812	2,998	3,097	3.3
100–149 beds	363	3,203	3,321	3.7
150–199 beds	147	3,449	3,606	4.6
200+beds	146	3,815	4,013	5.2
Teaching status:				
Nonteaching	4,356	4,149	4,345	4.7
Resident/bed ratio less than 0.25	963	5,470	5,739	4.9
Resident/bed ratio 0.25 or greater	227	8,348	8,928	6.9
Disproportionate share hospitals (DSH):				
Non-DSH	3,987	4,499	4,712	4.7
Urban DSH:				
100 beds or more	1,149	6,077	6,424	5.7
Fewer than 100 beds	80	4,092	4,292	4.9
Rural DSH:				
100 beds or more Not rural referreal Centers or sole Community hospitals	80	2,927	3,065	4.7
Fewer than 100 beds not rural referral centers or sole community hospitals	164	2,590	2,697	4.1
Sole community hospitals	49	3,241	3,381	4.3
Rural referral centers and sole community or rural referral centers	37	4,027	4,269	6.0
Urban teaching and DSH:				
Both teaching and DSH	609	6,728	7,119	5.8
Teaching only	498	5,560	5,844	5.1
DSH only	620	4,894	5,159	5.4
Nonteaching and non-DSH	1,306	4,523	4,741	4.8
Other special status (rural):				
Sole community hospital	382	3,379	3,503	3.7
Rural referral center (RRC)	217	3,823	4,015	5.0
Sole community and rural referral center	27	4,125	4,348	5.4
Medicare-dependent	557	2,924	3,010	2.9
Type of ownership:				
Voluntary	3,050	5,151	5,412	5.1
Proprietary	873	4,483	4,720	5.3
Government	1,532	4,588	4,830	5.3
Medicare utilization as percent of inpatient days:				
0–25	373	6,823	7,204	5.6
25–50	2,932	5,202	5,468	5.1
50–65	1,695	4,373	4,586	4.9
Over 65	396	4,202	4,447	5.8

[1] Percentage changes shown in this column are taken from Table II, column V. Because the dollar amounts shown in this table are rounded to the nearest dollar, percentage changes computed on the basis of these amounts will differ slightly from those displayed in this column.

Appendix B—Data Sources Used To Estimate the Market Basket Relative Weights and Choice of Price Proxy Variables

As discussed in the preamble of this final rule, we are rebasing and revising the hospital market basket (input price index). This appendix describes the technical features of the 1987-based index that we are using in this final rule. The differences between the proposed 1987-based market basket and the previous 1982-based market basket are noted. In September 3, 1986 (at 51 FR 31461) we discussed the 1982-based hospital market basket.

We present this description of the market basket in three steps:

• A synopsis of the structural differences between the 1982-based index and the proposed 1987-based market basket.

• A description of the methodology used to develop the cost category weights in the 1987-based market basket, making note of the differences from the methodology used to develop the 1982-based market basket.

• A description of the data sources used to measure price inflation for each component of the 1987-based market basket, making note of the differences from the price proxies used in the 1982-based hospital market basket.

A. Synopsis of Structural Changes Adopted in the Rebased 1987 Hospital Market Basket

Three major structural differences exist between the 1982-based and the current 1987-based hospital market basket:

1. Separate Market Baskets Will Be Used for Prospective Payment System and Excluded Hospitals

The 1982-based market basket cost category weights were derived from expenditure data gathered by the AHA Annual Survey for both prospective payment system (short-term acute care) and excluded (long term care, children's rehabilitation and psychiatric hospitals). Although HCFA uses separate methodologies for paying prospective payment system and excluded hospitals, the 1982-based hospital market basket has been used to update payments to both types of hospitals. We will use separate market baskets for prospective payment and excluded hospitals in order to recognize the differences between hospitals in the consumption of labor, goods, services and other inputs. As a result, the 1987-based prospective payment hospital market basket weights were derived from data pertaining exclusively to prospective payment hospitals. We have developed and will use a separate 1987-based excluded hospital market basket, whose weights were derived from data pertaining to excluded hospitals.

2. More Recent Hospital Expenditures Data Are Being Used in the 1987-Based Hospital Market Baskets

The 1982-based market basket contained cost shares that were derived in part from the Annual Survey of the American Hospital Association (AHA) for 1983 (1982 data). The 1987-based market baskets use data from the 1988 AHA Annual Survey for 1987 costs.

3. New Hospital Types Were Included in the 1987-Based Prospective Payment Hospital Market Basket

In the 1982-based market basket, alcohol and substance-abuse facilities were considered excluded hospitals. Had HCFA used separate market baskets for prospective payment system and excluded hospitals at that time, alcohol and substance abuse facilities would have been updated according to the excluded index.

However, as provided for in the September 1, 1987 final rule, effective with cost reporting periods beginning on or after October 1, 1987, alcohol and substance-abuse hospitals were included for payment under the prospective payment system (52 FR 33043). Effective with cost reporting periods beginning on or after October 1, 1987, hospitals in Puerto Rico were also included for payment under the prospective payment system (52 FR 33043). Accordingly, the 1987 prospective payment system hospital market basket weights include both substance-abuse hospitals and hospitals in Puerto Rico.

B. Methodology for Developing the Cost Category Weights

Cost category weights for the 1987-based market basket were developed in four stages. First, base weights for the five main categories (Wages and Salaries, Employee Benefits, Professional Fees, Capital and All Other Items) were derived from the 1987 AHA Annual Survey. Second, the five main base weights were divided into subcategories using four major data sources:

• Cost shares derived from the 1987 AHA Hospital Administrative Services Survey.

• Projected cost shares from the 1986 AHA Annual Survey (for two of the categories not available in the 1988 Annual Survey).

• Cost shares derived from the 1987 Medicare Cost Report.

• Residual cost shares were aged to 1987 using price changes.

Third, the cost category weights were assembled and sorted into their appropriate positions. Note that the contract nursing weight was removed from the All Other Items category and was split between the compensation categories (Wages and Salaries, Fringe Benefits). Finally, weights for the categories that are exempted from payment under the prospective payment system (residents, medical fees and capital) were removed and the remaining weights were renormalized to equal one hundred percent. Table 1, located at the end of this appendix, describes the process by which the prospective payment system market basket weights were developed. Below, we describe the source of the five main category weights and their subcategories in the 1987-based market basket. We make note of the differences between the methodologies used to develop the 1982-based and 1987-based market baskets.

1. *Wages and Salaries:* The wages and salaries cost category is one of the five base weights derived from the 1988 AHA Annual Survey (1987 data). This cost category was disaggregated into nine occupational subcategories (professional and technical, managers and administration, sales, clerical, craft and kindred, operatives excluding transport, transport equipment operatives, nonfarm laborers and service workers) to reflect the mix of labor inputs used by hospitals. The 1982-based market basket used a survey conducted by the U.S. Census Bureau of employment in the hospital industry as published in the 1980 Census of Population, Subject Report, Occupation by Industry in May 1984 to develop the nine occupational weights. In the 1987-based market basket, the occupational subcategory weights for wages and salaries were developed from the 1987 Current Population Survey.

2. *Fringe Benefits:* The fringe benefits cost category is one of the five base weights derived from the 1988 AHA Annual Survey (1987 data). Like wages and salaries, the fringe benefit weight in the 1987-based market basket is a composite of nine labor subcategories. The fringe benefits category in the 1982-based market basket was not a composite of labor inputs.

3. *Professional Fees:* The professional fees cost category was derived from the 1988 AHA Annual Survey (1987 data). It was split into the subcategories medical and other fees using data derived from the American Medical Association. Medical fees is one of the subcategories that was excluded from the hospital market basket.

4. *Utilities:* Until 1986, the AHA Annual Survey showed utilities as a separate cost category. The 1987-based market basket weight for utilities was derived by extrapolating the 1986 AHA Annual Survey (1985 data) utilities cost weight forward to 1987 using the rate of growth in the HAS Monitrend cost weight for utilities between 1985 and 1987. The 1982-based market basket cost weight for utilities was derived from the AHA survey. Subcategories for the utilities category (fuel oil, coal, and electricity; natural gas; motor gasoline; and water and sewerage) were derived by applying relative shares (price adjusted) from the Bureau of Economic Analysis' Input-Output structure for hospital industry.

5. *Professional Liability Insurance:* The 1982-based market basket had a weight for professional liability insurance that was derived from the HAS/Monitrend survey. The weight for the 1987-based market basket is a 1987 Medicare Cost Report estimate of the mean share of hospital expenditures that went to the cost of professional liability insurance.

6. *All Other Goods and Services:* The all other goods and services category has more subcategories than any other market basket category. Goods found in this category include: direct service food, contract service food, pharmaceuticals, chemicals, medical instruments, photo supplies, rubber and plastics, paper products, apparel, machinery and equipment and miscellaneous products. Services found in this category include: business services, computer services, transportation and shipping, telephone, blood services, postage, other labor intensive services and other nonlabor intensive services. With the exception of direct service food and pharmaceuticals, relative shares from the 1982 regulation market basket were aged forward to 1987 and used to divide the all other goods and services category into its subcategories. The weights for direct service food and pharmaceuticals were derived from the 1987 HAS/Monitrend surveys.

C. Price Proxies Used to Measure Cost Category Growth

The measures used to determine price growth for the prospective payment system and exempt market baskets are identical. However, as discussed above, the two indexes differ in terms of the weights for their respective cost categories.

1. *Wages and Salaries:* For measuring price growth in the 1987-based market basket, ten price proxies are applied to the nine occupational subcategories within the wages and salaries component. The professional and technical subcategory was split in half. Against one half of the professional and technical subcomponent an Employee Cost Index (ECI) for hourly wages and salaries paid to civilian hospital employees was

applied. Against the other half of the professional and technical component an ECI of hourly wages and salaries paid to professional and technical workers in private industry was applied. The 1982-based market basket used Average Hourly Earnings (AHE) for private hospital workers as a measure of price growth instead of the ECI for civilian hospital workers for the internal 50 percent of the weight. The other eight occupational subcategories of the wages and salaries component received ECI for wages and salaries for private industry workers in their respective occupational categories. Table 2 at the end of this appendix describes the wages and salaries component of the market basket.

2. *Employee Benefits:* The 1987-based hospital market basket uses occupation-specific ECIs for employee benefits. The distribution of weights and price proxies is the same as for wages and salaries discussed above. The components are summed into a composite index. This process is described more fully in the preamble of this rule. The employee benefits composite of the 1982-based market basket used U.S. Department of Commerce economy-wide employee benefits per worker as an indicator of employee benefit cost pressure.

3. *Non-Medical Professional Fees:* The ECI for wages and salaries to employees in professional and technical workers in private industry is applied to this category. The same price measure was used in the 1982-based market basket.

4. Fuel Oil, Coal and Other Fuel: The percentage change in the price of middle distillates as measured by the Producer Price Index (PPI) Commodity Code #0573) was applied to this component. The same price measure was used in the 1982-based market basket.

5. *Electricity:* The percentage change in the price of industrial power, 500 kw-demand, as measured by the PPI (Community Code #0543) was applied to this component. The same price measure was used in the 1982-based market basket.

6. *Natural Gas:* The percentage change in the price of gas fuels as measured by the PPI (Commodity Code #0531) was applied to this component. The same price measure was used in the 1982-based market basket.

7. *Motor Gasoline:* The percentage change in the price of gasoline as measured by the PPI (Commodity Code #0571) was applied to this component. The same price measure was used in the 1982-based market basket.

8. *Water and Sewerage:* The percentage change in the price of water and sewerage maintenance as measured by the Consumer Price Index (CPI) for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

9. *Professional Liability Insurance:* The percentage change in the professional liability insurance price as estimated by the Insurance Services Office was applied to this component. The same price measure was used in the 1982-based market basket.

10. *Pharmaceuticals:* The percentage change in the price of ethical preparations as measured by the PPI (Commodity Code #0635) was applied to this variable. The same price measure was used in the 1982-based market basket.

11. *Food, Direct Purchases:* The percentage change in the price of processed foods and feeds as measured by the PPI (Commodity Code #02) was applied to this component. The same price measure was used in the 1982-based market basket.

12. *Food, Contract Services:* The percentage change in the price of food purchased away from home as measured by the CPI for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

13. *Chemical and Cleaning Products:* The percentage change in the price of industrial chemical products as measured by the PPI (Commodity Code #061) was applied to this component. The same price measure was used in the 1982-based market basket.

14. *Surgical and Medical Equipment:* The percentage change in the price of medical and surgical instruments as measured by the PPI (Commodity Code #1562) was applied to this component. The same price measure was used in the 1982-based market basket.

15. *Photographic Supplies:* The percentage change in the price of photographic supplies as measured by the PPI (Commodity Code #1542) was applied to this component. The same price measure was used in the 1982-based market basket.

16. *Rubber and Plastics:* The percentage change in the price of rubber and plastic products as measured by the PPI (Commodity Code #07) was applied to this component. The same price measure was used in the 1982-based market basket.

17. *Paper Products:* The weighted average of the percentage change in the price of converted paper and paperboard products as measured by the PPI (Commodity Code #0915 (59.9 percent)) and the percentage change in the price of paper excluding newsprint and packaging paper (Commodity Code #091301 (40.1 percent)) was applied to this component. The same price measure was used in the 1982-based market basket.

18. *Apparel:* The percentage change in the price of textile house furnishings as measured by the PPI (Commodity Code #382) was applied to this component. The same price measure was used in the 1982-based market basket.

19. *Minor Machinery and Equipment:* The percentage change in the price of machinery and equipment as measured by the PPI (Commodity Code #11) was applied to this component. The same price measure was used in the 1982-based market basket.

20. *Miscellaneous Products:* The percentage change in the price of all finished goods as measured by the PPI was applied to this component. The same price measure was used in the 1982-based market basket.

21. *Business Services:* The percentage change in the AHEs of employees engaged in the business services industry as measured by the Bureau of Labor Statistics (SIC Code #73) was applied to this component. The same price measure was used in the 1982-based market basket.

22. *Computer and Data Processing Services:* The percentage change in the AHE of employees engaged in firms furnishing computer data processing services (SIC Code #737) was applied to this component. The same price measure was used in the 1982-based market basket.

23. *Transportation and Shipping:* The percentage change in the transportation component of the CPI for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

24. *Telephone:* The percentage change in the price of telephone services as measured by the CPI for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

25. *Blood Services:* The percentage change in the price of providing blood and related biologicals as measured by the PPI (Commodity Code #063711) was applied to this component. The same price measure was used in the 1982-based market basket.

26. *Postage:* The percentage change in the price of postage as measured by the CPI for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

27. *All Other Services, Labor Intensive:* The percentage change in the ECI for wages and salaries paid to service workers employed in private industry was applied to this component. The same price measure was used in the 1982-based market basket.

28. *All Other Services, Nonlabor Intensive:* The percentage change in the all-items component of the CPI for all urban consumers was applied to this component. The same price measure was used in the 1982-based market basket.

For further discussion of the rationale for why the price proxies for specific noncompensation related cost weights were chosen, the reader is referred to the September 3, 1986, **Federal Register** (51 FR 31582).

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Appendix B Table 1--DEVELOPING INPUT PRICE INDEX WEIGHTS AND COST CATEGORIES

STEP ONE	STEP TWO		STEP THREE		STEP FOUR
BASE WEIGHTS ARE TAKEN FROM THE 1988 AHA ANNUAL SURVEY (1987 data)	ALTERNATIVE DATA SOURCES ARE USED TO ESTIMATE WEIGHTS FOR CERTAIN COMPONENTS	1982 SHARES ARE AGED TO 1987 AND USED TO DISAGGREGATE OTHER CATEGORIES (1)	CONTRACT NURSING IS SHIFTED FROM ALL OTHER INTO THE WAGES AND BENEFITS	COMPONENTS ARE ASSEMBLED INTO A COMPLETE INPUT PRICE INDEX	REGULATION CATEGORY WEIGHTS ARE SELECTED AND RENORMALIZED TO EQUAL 100% (2)
1. Wages & Salaries-				1. Wages & Salaries-	1. Wages & Salaries
1a) Residents				1a) Residents	
1b) All Other				1b) All Other	1b) All Other
			1c) Contr. Nurs.	1c) Contr. Nurs.	1c) Contr. Nurs.
2. Employee Benefits				2. Employee Benefits	2. Employee Benefits
			2a) Contr. Nurs.	2a) Contr. Nurs.	2a) Contr. Nurs.
				2b) All Other	2b) All Other
3. Professional Fees		3a) Medical Fees		3. Professional Fees	3. Professional Fees
		3b) Other Fees		3a) Medical Fees	
				3b) Other Fees	3b) Other Fees
4. Capital				4. Capital	
4a) Depreciation		4a1)Fixed Depre.		4a1)Fixed Depre.	
4b) Interest		4a2)Other Depre.		4a2)Other Depre.	
		4b) Interest		4b) Interest	
		4c) Other		4c) Other	
5A. All Other (AHA)	5A. All other (AHA)	-----	-----	-----	
	5a)Malpractice(3)				
	5b)Energy (3)	5b) Utilities (4)		5b) Utilities	5b) Utilities
	5c)Food (3)	5b1) Fuel/Oil/Etc		5b1) Fuel/Oil/Etc	5b1) Fuel/Oil/Etc
	5d)Cont. Nurs.(3)	5b2) Electricity		5b2) Electricity	5b2) Electricity
	5d)Pharmacy (3)	5b3) Natural Gas		5b3) Natural Gas	5b3) Natural Gas
	5e)Residual	5b4) Motor Gas		5b4) Motor Gas	5b4) Motor Gas
		5b5) Water/Sewer		5b5) Water/Sewer	5b5) Water/Sewer
		5c) Malpractice		5c) Malpractice	5c) Malpractice
		5d) All Other		5d) All Other	5d) All Other
		5d1) Contr. Nurs			
		5d2) Food Direct		5d2) Food Direct	5d2) Food Direct
		5d3) Food Service		5d3) Food Service	5d3) Food Service
		5d4) Pharmacy		5d4) Pharmacy	5d4) Pharmacy
		5d5) Chemicals		5d5) Chemicals	5d5) Chemicals
		5d6) Med. Instru.		5d6) Med. Instru.	5d6) Med. Instru.
		5d7) Photo Sup.		5d7) Photo Sup.	5d7) Photo Sup.
		5d8) Rubber/Plas.		5d8) Rubber/Plas.	5d8) Rubber/Plas.
		5d9) Paper Prod.		5d9) Paper Prod.	5d9) Paper Prod.
		5d10) Apparel		5d10) Apparel	5d10) Apparel
		5d11) Mach./Equip.		5d11) Mach./Equip.	5d11) Mach./Equip.
		5d12) Misc Prod.		5d12) Misc Prod.	5d12) Misc Prod.
		5d13) Bus. Svcs.		5d13) Bus. Svcs.	5d13) Bus. Svcs.
		5d14) Compu. Svcs		5d14) Compu. Svcs	5d14) Compu. Svcs
		5d15) Trans/Ship.		5d15) Trans/Ship.	5d15) Trans/Ship.
		5d16) Telephone		5d16) Telephone	5d16) Telephone
		5d17) Blood Svcs		5d17) Blood Svcs	5d17) Blood Svcs
		5d18) Postage		5d18) Postage	5d18) Postage
		5d19) Other Labor		5d19) Other Labor	5d19) Other Labor
		5d20) Oth nonLabor		5d20) Oth nonLabor	5d20) Oth nonLabor

NOTES:

1) The relative shares are taken from the 1982 based index and aged forward to 1987. When the updated BEA Input/Output matrix is released, the 1987 relative shares will be replaced.

2) Current regulations exclude Residents, Medical Fees and capital from the index.

3) AHA Monitrend median values are used to estimate food and pharmacy weights. Contract Nursing and energy values are extrapolated from the 1986 AHA Annual Survey (1985 data). The Malpractice weight is obtained from the Medicare Cost Report.

4) Water and Sewer is removed from the "All Other" residual category and added to energy to form Utilities.

LEGEND:

---- : Disaggregated into components.

----> :Continued in the next phase.

----| :Not Continued in the next phase.

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APPENDIX B, TABLE 2.—HCFA BLENDED WAGES AND SALARIES INDEX

Wage and salaries component of the 1987-based market basket	Price proxy
(1) Professional and Technical.	50/50 blend of ECI wages and salaries for civilian hospital workers and ECI for wages and salaries of professional specialty and technical workers.
(2) Managers and Administrators.	ECI for wages and salaries for executives, administrative and managerial workers.
(3) Sales	ECI for wages and salaries for sales workers.
(4) Clerical workers	ECI for wages and salaries for administrative support including clerical workers.
(5) Craft and Kindred	ECI for wages and salaries for precision production, craft and repair workers.
(6) Operatives except transport.	ECI for wages and salaries for machine operators, assemblers and inspectors.
(7) Transport equipment operatives.	ECI for wages and salaries for transportation and material moving workers.
(8) Nonfarm laborers	ECI for wages and salaries for handlers, equipment cleaners, helpers and laborers.
(9) Service workers	ECI wages and salaries for service occupations.
Total wages and salaries.	Total weight for wages and salaries is 52.2.

Appendix C—Final Recommendation of Update Factors for Rates of Payment for Inpatient Hospital Services

I. Background

Several provisions of the Social Security Act (the Act) apply to setting update factors for services furnished in FY 1991 by hospitals subject to the prospective payment system and those excluded from the prospective payment system. Section 1886(b)(3)(B)(i) of the Act, sets the FY 1991 applicable percentage increases for prospective payment hospitals for FY 1991 as the market basket percentage increase for all hospitals in all areas. Section 1886(b)(3)(B) of the Act also governs the target rate-of-increase limits for hospitals excluded from the prospective payment system. Therefore, in accordance with section 1886(d)(3)(A) of the Act, we are updating the average standardized amounts and the target rate-of-increase limits for hospitals excluded from the prospective payment system as provided for in section 1886(b)(3)(B) of the Act, as set forth above.

Section 1886(e)(3)(A) of the Act requires that the Prospective Payment Assessment Commission (ProPAC) recommend to the Secretary by March 1, 1990 an update factor that takes into account changes in the market basket index, hospital productivity, technological and scientific advances, the quality of health care provided in hospitals, and long-term cost effectiveness in the provision of inpatient hospital services.

Section 1886(e)(4) of the Act, as amended by section 4002(f) of Public Law 100–203, requires that the Secretary, taking into consideration the recommendations of ProPAC, recommend update factors for FY 1991 that take into account the amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality.

As required by section 1886(e)(5) of the Act, we published the recommended FY 1991 update factors that are provided for under section 1886(e)(4) of the Act as Appendix D of the proposed rule (55 FR 19566).

We note that although we recommended appropriate update factors, requested and received public comments on these recommendations, and are providing a final recommendation, Congress actually prescribed the update factors to be used in FY 1991 in section 1886(b)(3)(B)(i) of the Act, as amended by section 4002(a) of the Omnibus Budget Reconciliation Act of 1989 (Pub. L. 101–239). That is, as explained in the addendum to this final rule, the applicable percentage increase of FY 1991 for inpatient hospital services for hospitals subject to the prospective payment system is equal to the market basket rate of increase forecasted for FY 1991. The most recent forecasted hospital market basket increase for FY 1991 is 5.2 percent. Therefore, the applicable percentage increase for prospective payment hospitals is 5.2 precent.

For cost reporting periods beginning on or after October 1, 1989, and before October 1, 1990, section 1886(b)(3)(B)(ii) of the Act, as amended by section 4002(e) of Public Law 100–203, provides that the applicable percentage increase for hospitals and hospital units excluded from the prospective payment system equals the hospital market basket rate of increase. The most recent forecasted market basket for excluded hospitals increase is 5.3 percent; therefore, the increase in these hospitals and hospital units target rate is also 5.3 percent.

We received several items of correspondence during the public comment period concerning our proposed recommendation. After consideration of all the arguments presented, we have decided that our final recommendation will be the same as our proposed recommendation. That is, we recommend that the prospective payment rates be increased, on average, by an amount equal to the market basket percentage increase minus 1.5 percentage points. Based on the most recent forecasted market basket increase, that is, 5.2 percent, the recommended update is 3.7 percent on average.

However, we recommend that rural hospitals receive an update equal to the rate of increase in the hospital market basket, or 5.2 percent, and that urban hospitals receive an update equal to the rate of increase in the hospital market basket minus 1.75 percentage points, or 3.45 percent.

We also recommend that hospitals excluded from the prospective payment system receive an update equal to the market basket percentage increase, based on a new market basket that measures input price increases for services rendered by excluded hospitals. That market basket forecast is 5.3 percent.

In recommending these increases, we took into account the requirement in section 1886(e)(4) of the Act that the amounts be high enough to ensure the efficient and effective delivery of medically appropriate and necessary care of high quality. In addition, as required by section 1886(e)(4) of the Act, we have taken into consideration ProPACs recommendations.

We are recommending an update that is consistent with the Administration's budget proposal that, on average, all hospitals receive an update in their payments for FY 1991 equal to the market basket percentage increase minus 1.5 percentage points. Our recommendation is supported by analyses that account for changes in hospital productivity, scientific and technological advances, practice pattern changes, and changes in case mix.

At the beginning of the prospective payment system update process, HCFA established a conservative normative standard for hospital productivity increases of 1.0 percent per year. In the short run, any increases in productivity in excess of 1.0 percent would be kept by hospitals as increases in the operating margin. Increases in productivity of less than 1.0 percent would be discouraged by this standard. Hospitals have made substantial increases in productivity since the implementation of the prospective payment system, and we believe that productivity gains can and should continue. Therefore, we believe that a −1.0 percent adjustment for productivity increases continues to be appropriate.

We rely on the results of studies such as those conducted by ProPAC to estimate the impact of scientific and technological advances. ProPAC estimates that the incremental costs of cost-increasing new technologies on operating costs range from 0.5 to 0.9 percent with a best estimate of 0.7 percent. (The impact of cost-decreasing technologies, which ProPAC estimates at −0.4 to −0.6 percent with a best estimate of −0.5 percent, is reflected in the productivity factor).

We measured practice pattern changes based on changes in average length of stay since the beginning of the prospective payment system. Average length of stay declined dramatically during the first years of the prospective payment system and gradually increased in subsequent years. We have recommended gradual adjustments over time for this factor in order to avoid a precipitous reaction to the implementation of the prospective payment system. We believe that an adjustment of as much as −1.0 percent for cumulative changes in practice patterns would be appropriate.

Overall, the combined adjustment for productivity, technology, and practice pattern changes could range from −0.1 to 1.5 percentage points. Recognizing −1.0 percent for productivity, +.5 percent for technology, and −.5 percent for practice pattern changes

would result in a net adjustment of −1.0 percentage points.

In addition, our analysis takes into account changes in case mix, net of changes attributable to improved coding practices and DRG reclassification and recalibration. We found that observed increase in case-mix was 2.3 percent during FY 1989. We estimate real case mix increase at 1.0 to 1.2 percent. This estimate is supported by preliminary findings from a study by RAND Corporation on case mix change. In addition, we estimate that DRG reclassification and recalibration in FY 1989 resulted in a 0.6 percent decrease in case mix. The resulting adjustment to account for changes in case mix during FY 1989, the most recent year for which data are available, could range from −0.7 to −0.5 percent (the sum of −2.3, +1.0 to 1.2, and +0.6.).

We believe the above analysis supports a recommendation that, on average, hospitals receive an update for FY 1991 equal to the market basket percentage increase minus 1.5 percentage points.

However, we believe a differential update for rural hospitals would be more appropriate and are recommending that rural hospitals receive the full market basket rate of increase, that is, 5.2 percent. To determine whether we should recommend a differential update for FY 1991, we examined the FY 1988 prospective payment system profit margin data (the most recent data available). The actual margin data indicate rural hospitals continued to have a significantly lower margin than urban hospitals in FY 1988. The average FY 1988 margin for rural hospitals was −2.53 percent compared to an average margin of 3.0 percent for urban hospitals. We also analyzed the relative impact of the Public Law 101–239 payment changes on Medicare operating margins. This analysis indicated that the provisions of Public Law 101–239 tended to favor rural hospitals relative to urban hospitals. If the revised payment rules had been in effect in FY 1988, rural hospitals would have had Medicare operating margins that were equivalent to the Medicare operating margins for "other urban" hospitals. The margins for hospitals in large urban areas would have been somewhat higher than those of the other geographic areas.

Although our analysis suggests that Public Law 101–239 has significantly improved the margins for rural hospitals relative to urban hospitals, we believe a higher update for rural hospitals is still warranted in view of the impact that changes we are proposing to make in FY 1991 would have on relative payment levels. In recent years, DRG reclassification and recalibration has resulted in greater increases in the weights for the more resource-intensive DRGs relative to the less resource-intensive DRGs, and thus has tended to favor urban hospitals. Our impact analysis indicates that this trend will continue with the FY 1991 DRG reclassification and recalibration. Moreover, our impact analysis indicates that the wage index will reduce payments to rural hospitals relative to urban hospitals. Although the reduction in the labor market portion of the standardized amount resulting from the market basket rebasing will increase payments to rural hospitals, this increase will not offset the reductions in payments resulting from the DRG weights and wage index.

To offset the effects of the changes and in recognition that rural hospitals have not fared as well as urban hospitals in the past under the prospective payment system, we are recommending that rural hospitals receive an update equal to the rate of increase in the hospital market basket, or 5.2 percent. To maintain the average update at market basket minus 1.5 percentage points, we are recommending that urban hospitals receive an update equal to market basket minus 1.75 percentage pints, or 3.45 percent. If our update recommendation were adopted, the FY 1991 changes would result in a higher increase in payments to rural hospitals than to urban hospitals.

Below is the esimtated impact of the final FY 1991 rule on program payments based on a uniform market basket update as provided for under current law compared to what the esimtated impact would be if our recommended update factors became law.

COMBINED EFFECT OF ALL FY 1991 CHANGES

[Percentage Increase In Program Payment]

	Current law update	Recommended update
All Hospitals	5.1	3.6
Large Urban Hospitals	5.6	3.9
Other Urban Hospitals	5.0	3.3
Rural Hospitals	4.0	4.0

Comment: A number of commenters took issue with our recommendation for an update in the prospective payment rates of the market basket increase minus an average of 1.5 percentage points, or 3.7 percent based on a market basket increase of 5.2 percent. The majority of commenters stated that in order to ensure the financial viability of hospitals, the update should be equal to the full market basket increase. Some commenters suggested that the update should equal the amount recommended by ProPAC, which recommended that the update equal, on average, the increase in the market basket as modified by ProPAC, minus 0.5 percent, or 4.9 percent.

Response: We believe that the update that we recommend is appropriate and is supported by our analytic framework and by our analysis of overall operating margins in the hospital industry.

The prospective payment system operating margins have been declining since the first year, to approximately 2.2 percent for fiscal year 1988, the most recent year for which we have sufficient data to calculate operating margins based on audited data. The Secretary's prospective payment system update recommendation is based on a full history of the prospective payment system costs and operating margins as they relate to the financial viability of the hospital industry, rather than a speculative projection based on information that is not yet available. Although Medicare operating margins have diminished because costs have been rising faster than revenues, we have observed that rapidly increasing costs for individual hospitals are associated with generous operating margins in previous cost reporting periods. Observers have noted a strong relationship between increases in a hospital's costs per discharge in a year and the hospital's margin in the prior year. Steven Sheingold (Health Affairs, Fall, 1989) observed that, when hospitals were arrayed by the prospective payment system profit margins into quintiles, hospitals with high profits in a fiscal year showed higher costs per discharge in the following fiscal year. This relationship held for all quintiles. Sheingold attributed a substantial portion of the increase in costs to the existence of high margins and suggests that hospitals tend to spend up to expected margins. Thus hospitals with low expected margins tended to increase their expenditures less than hospitals with high expected margins. Sheingold further speculated that the evidence shows that increasingly restrictive prospective payment system rate increases resulted in hospitals spending surpluses at a reduced rate. Sheingold's findings were supplemented by an internal study by HCFA showing over a three year span the relationship between average profit margins and average cost increases. The study found that hospitals with low profit margins in a year had higher than average cost increases in that year but lower than average cost increases in the following year and that hospitals with high profit margins in a year had lower than average cost increases in that year but higher than average cost increases in the following year. These findings suggest that, over time, hospitals manage their operating margins, controlling costs in response to losing money and spending more in response to high profits. Given the incentive of lower or negative profit margins, hospitals appear to be able to restrain the growth in costs per case. These studies appear to support the premise underlying the Secretary's update recommendation, that given the level of past prospective payment system margins and the current financial viability of the hospital, it is within the capability of hospitals to further contain increases in prospective payment system costs in order to maintain a reasonable level of return on prospective payment system revenues.

Further, we note that cumulative Medicare net income (including prospective payment pass-through items) revenue margins in the first five years of the prospective payment system exceeded the analogous measure for the overall hospital industry. Over the first five years of the prospective payment system, cumulative prospective payment system margins, including pass-throughs, were 7.6 percent compared to a total net income rate for the community hospital sector of 5.3 percent. We believe it appropriate to take this into account in recommending an update factor. The hospital industry continues to demonstrate strong financial viability despite declining prospective payment system operating margins. Overall community hospital margins increased in the first two years of the prospective payment system and

declined in the following three years of the prospective payment system. In the most recent years, 1989 and 1990, a period for which prospective payment system margins are expected to decline, overall community hospital margins have increased and currently maintain a level of 5.3 percent, equivalent to that experienced in FY 1983, the year preceding implementation of the prospective payment system.

The historical context suggests that hospitals have been rewarded well under the prospective payment system. Further, it suggests that an appropriate response to falling margins is to encourage hospitals to improve their cost containment programs. Finally, we believe that a balanced assessment of the history of the prospective payment system and the community hospital sector show that further restraint in increases in prospective payment system revenues of the magnitude recommended by the Secretary are justified and that such restraints have not, nor are expected to, be a threat to overall hospital financial viability. Therefore, we conclude that the one percentage point difference between the Secretary's recommendation and ProPAC's recommendation is justified.

Comment: We received several comments on the analytic framework used to support our update recommendation. One commenter took issue with the assumption used in the analytic framework that hospital productivity increased 1.0 percent in a year. ProPAC argued that the analytic framework should include an adjustment for within-DRG changes in case complexity. ProPAC also took issue with our reduction of 0.5 percent for changes in practice patterns on the basis that earlier recommended adjustments for site of care substitution were sufficient. Another commenter argued that there was no basis for assuming that average length of stay had decreased. One commenter suggested that we had no basis for supporting changes in case mix used in the analytic framework.

Response: We consider 1.0 percent annual productivity growth in the hospital industry to be a conservative normative standard that has widespread use as an indicator of hospital productivity improvements. Several studies over the years have resulted in conclusions that are not inconsistent with 1.0 percent annual growth. In particular, a study by ProPAC to develop alternative productivity measures found that productivity increased by approximately 1 percent per year over the period 1986–1988. Productivity increased relatively rapidly in the first two years of the prospective payment system, then declined before leveling at a rate of increase of about 1 percent.

We do not agree that a separate item in the analytic framework for within-DRG increases in case complexity is necessary. Changes related to within-DRG case complexity are reflected in scientific and technological advances and in the practice pattern components of the framework. Our estimate of overall real case mix change is supported by a study conducted by the RAND corporation.

Our estimate of change in practice patterns is proxied by our observation of cumulative changes in average length of stay since the beginning of the prospective payment system. Average length of stay declined dramatically during the first years of the prospective payment system and has gradually increased in subsequent years. We have made and will continue to make only gradual adjustments for this factor over time to avoid precipitous adjustments to the update amount. We have yet to adjust fully for the cumulative decline in average length of stay since the inception of the prospective payment system.

[FR Doc. 90–20677 Filed 8–31–90; 8:45 am]

BILLING CODE 4120-01-M

federal register

Tuesday
September 4, 1990

Part IV

Department of Health and Human Services

Health Care Financing Administration

Medicare Program; Model Fee Schedule for Physicians Services; Notice

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[BPD-699-NC]

RIN: 0938-AE86

Medicare Program; Model Fee Schedule for Physicians' Services

AGENCY: Health Care Financing Administration (HCFA), HHS.

ACTION: Notice with comment period.

SUMMARY: This notice announces and invites comments on a model fee schedule for physicians' services that is required by section 6102 of the Omnibus Budget Reconciliation Act of 1989. The model fee schedule provides *very preliminary* estimates for some, but not all, services to illustrate the effects of the Medicare physician payment fee schedule that will begin to take effect in January 1992. In accordance with section 6102(f)(11), we are making the model fee schedule available to the public through publication of this notice. Any comments received from the public will be considered carefully, but not specifically addressed in a subsequent proposed rule.

DATES: Comments should be received at the appropriate address, as provided below, no later than 5 p.m. on November 3, 1990.

ADDRESSES: Mail comments to the following address:

Health Care Financing Administration, Department of Health and Human Services, Attention: BPD-699-NC, P.O. Box 26676, Baltimore, Maryland 21207.

If you prefer, you may deliver your comments to one of the following addresses:

Room 309-G, Hubert H. Humphrey Building, 200 Independence Ave., SW., Washington, DC, or

Room 132, East High Rise Building, 6325 Security Boulevard, Baltimore, Maryland.

Due to staffing and resource limitations, we cannot accept facsimile (FAX) copies of comments. In commenting, please refer to file code BPD-699-NC. Comments received timely will be available for public inspection as they are received, generally beginning approximately 3 weeks after publication of a document, in Room 309-G of the Department's offices at 200 Independence Ave., SW., Washington, DC, on Monday through Friday of each week from 8:30 a.m. to 5 p.m. (phone: 202-245-7890).

To obtain individual copies of this document, contact the following: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

The charge for individual copies is $1.50 for each issue or for each group of pages as actually bound, payable by check or money order to the Superintendent of Documents.

FOR FURTHER INFORMATION CONTACT: Terrence L. Kay, (301) 966-4494.

SUPPLEMENTARY INFORMATION:

I. Purpose of this Notice

On December 19, 1989, the Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239) was enacted. Section 6102(a) of Public Law 101-239 amended title XVIII of the Social Security Act (the Act) by adding a new section 1848, Payment for Physicians' Services. New section 1848 of the Act provides for replacing the current reasonable charge payment mechanism of actual, customary, and prevailing charges with a resource-based relative value scale (RBRVS) fee schedule beginning January 1, 1992.

Section 6102(f)(11) of Public Law 101-239 requires the Secretary to develop a model fee schedule using the methodology set forth in section 6102(a), before implementing the fee schedule for physicians' services. Also, the Secretary is required to submit the model fee schedule by September 1, 1990 to the appropriate committees of Congress and to make it available to the public.

The task of developing the fee schedule is extremely complex and will have significant impact on Medicare payment for various physician services. While the law prescribes many of the procedures and methods to be used in developing the fee schedule and in moving to the new system, the Secretary must also resolve a number of key payment policy and technical issues. The model fee schedule (attached as an Addendum to this notice) lists and explains these issues and describes steps that have been taken or will be taken toward resolution of the issues. In many cases, alternate options, rather than specific choices, are offered for public consideration and comment. This approach underlines our earnest desire to solicit the views and build on the experience of physicians, beneficiary groups, and others in the public to produce a Medicare fee schedule that is workable and fair.

The law requires that the fee schedule be phased in beginning in 1992, becoming fully effective in 1996. The publication of the model fee schedule is the first major step in this process. As required by the law, this model does contain relative values for as many services as can be assigned those values based on data developed so far: about 1,400 procedures out of some 7,000 expected to be covered in the final fee schedule. However, it is important to point out that the relative values included in the model fee schedule are very preliminary and should be treated as illustrative only. The study team that developed these values is presently refining and expanding its study. Important policy and technical issues are unresolved. In addition, 1987 data was used in computing the values. Many, and perhaps all, of these values will change when the study team completes its work, policy issues are resolved, and more recent data becomes available.

The model fee schedule is a structure and a basis for ongoing consultation with the Congress, the PPRC, the health care community, beneficiary groups, and others affected by our payment system. This model reflects our current thinking and progress toward resolving the policy issues involved. With additional information and analysis, there will be refinements in our policies before publication of a proposed rule next year. We are committed to working closely and productively with as many interested parties as possible in this massive and important undertaking, and to implementing a Medicare physician fee schedule beginning January 1, 1992.

In accordance with section 6102(f)(11) of Public Law 101-239, we submitted the model fee schedule to the appropriate committees. To comply with the statute that the model fee schedule be available to the public by September 1, 1990, we are publishing it, in its entirety, as an Appendix to this notice.

An important purpose of this notice is to provide an opportunity for interested parties to review and comment on the model fee schedule as it exists on September 1, 1990. Therefore, we encourage comments on all aspects of the model fee schedule. We do not intend to respond to written comments on this notice for the reasons explained in section III of this notice. Nevertheless, we are requesting that comments be received within 60 days from September 4, 1990 to allow us to consider all comments before we begin preparing the proposed rule that will set forth the proposed requirements for the final fee schedule. We have set an April 1, 1991 target date for publishing the proposed rule.

II. Information Collection Requirements

This notice does not impose information collection and recordkeeping requirements.

Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.).

III. Responses to Comments

While written comments on this notice will be considered carefully as we develop the proposed rule for the actual fee schedule for physicians' services, we do not plan to publish a summary of written comments with responses as part of that proposed rule. If you wish to have your comments formally considered, they must be submitted to us in response to the proposed rule in accordance with the instructions specified in that rule. We will summarize and respond to written comments on the proposed rule when we publish the final rule.

(Section 1848 of the Social Security Act (42 U.S.C. 1395w-4))

(Catalog of Federal Domestic Assistance Program No. 13.774, Medicare—Supplementary Medical Insurance Program)

Dated: August 17, 1990.

Gail R. Wilensky,

Administrator, Health Care Financing Administration.

Approved: August 28, 1990.

Louis W. Sullivan,

Secretary.

Appendix—

Model Fee Schedule for Physicians' Services

September, 1990

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Chapter I—Introduction

A. Physician Payment Reform in the Omnibus Budget Reconciliation Act (OBRA) of 1989

A comprehensive package of Medicare physician payment reforms was included in the Omnibus Budget Reconciliation Act (OBRA) of 1989 (Pub. L. 101-239), enacted on December 19, 1989. Section 6102(a) of Pub. L. 101-239 amended Title XVIII of the Social Security Act (the Act) by adding a new section 1848, "Payment for Physicians' Services". This new section contains three major elements.

First, the current reasonable charge payment mechanism will be replaced by a fee schedule for physicians' services based on a resource-based relative value scale (RBRVS). The relative value of each service will be the sum of relative value units (RVUs) representing physician work, practice expenses net of malpractice expenses (overhead) and the cost of professional liability insurance (malpractice). Nationally uniform relative values will be adjusted for each locality by a geographic adjustment factor (GAF). (Only one-fourth of the physician work relative value is subject to adjustment.) The conversion factor (converting total relative value units into dollar payment amounts) is to be budget neutral, so that had the fee schedule applied during 1991 it would result in the same level of aggregate payments as would be made under the reasonable charge system. The new fee schedule will be phased in over four years, beginning in 1992, with the new rules fully effective in 1996. During 1992 through 1995 transition provisions generally blend the old payment amounts with the new.

Second, the statute establishes volume performance standard rates of increase for expenditures for Medicare physicians' services. The goal of these Medicare volume performance standards (MVPS) is to involve physicians in the effort to slow the high annual rate of increase in expenditures by having them evaluate more carefully the services they provide with an eye toward eliminating those that are inappropriate or ineffective. The fiscal year 1990 performance standard rate of increase of 9.1 percent was announced in December 1989.

For fiscal year 1991 and future years the new law prescribes a process as follows: (1) The Secretary of Health and Human Services (HHS) recommends an acceptable performance standard rate (or rates) of increase; (2) the Physician Payment Review Commission (PPRC) comments; (3) Congress either establishes the rate of increase or, if it does not act, (4) the standard is determined by the Secretary using a default mechanism. Following this process, on April 16, 1990, the Secretary recommended an 8.7 percent performance standard rate of increase for surgical services for fiscal year 1991 and a 10.5 percent rate for other services.

If expenditures for physicians' services under Medicare Part B exceed the established standard and if Congress does not act to update the fee schedule conversion factor, then under a default mechanism the amount of the annual update for a subsequent year will be reduced below what it would otherwise have been. The reduction in the update may not exceed 2 percentage points for 1992 and 1993, 2.5 percentage points for 1994 and 1995 and 3.0 percentage points thereafter. (Updating the conversion factor is explained further in chapter II).

Third, beneficiary financial protection from charges in excess of the Medicare fee schedule will be improved. The current maximum allowable actual charge (MAAC), which constrains the

total amounts that physicians can charge Medicare beneficiaries, will be replaced by a new limiting charge, beginning in 1991. This provision and other provisions of OBRA of 1989 of particular interest to Medicare beneficiaries are described in chapter VI.

B. Development of the Model Fee Schedule

The fee schedule for physicians' services is expected to make significant changes in payment amounts for thousands of Medicare-covered services provided by physicians. The fee schedule as enacted in OBRA of 1989 represents a fundamental revision of the basis for physician payment in Medicare as it existed since the origins of the program in 1965. Development of the concepts and methodology underlying this new payment system has been underway for a number of years. Based on Congressional mandates contained in Pub. L. 99-272 (Consolidated Omnibus Budget Reconciliation Act of 1985), Pub. L. 99-509 (OBRA of 1986) and Pub. L. 100-203 (OBRA of 1987), the Department of HHS and the Health Care Financing Administration (HCFA) have devoted considerable effort to the development of a physician fee schedule based on a relative value scale.

HCFA has been assisted in this task by a number of experts inside and outside government, including the research team at the Harvard University School of Public Health led by William Hsiao, Ph.D. The Harvard research team produced "A National Study of Resource-Based Relative Value Scales for Physician Services" (September 1988) under a cooperative agreement with HCFA. We would also like to acknowledge the invaluable contribution made by the PPRC. In developing this report, we have extensively utilized the PPRC's analyses and recommendations in formulating our own views.

Pursuant to the statutory mandates listed above, the Department of HHS and HCFA submitted three reports to Congress in October 1989 ("Volume and Intensity of Physician Services", "Relative Value Scales for Physician Services" and "Implementation of a National Fee Schedule") that summarized the results of extensive research and analysis relating to the possible implementation of a Medicare physician fee schedule based on an RBRVS. These reports reviewed both the theoretical and practical ramifications of the transition to a fee schedule and simulated the effects of the change under various assumptions.

Enacted 2 months after HHS submitted these reports, Pub. L. 101-239 required the Secretary to implement a fee schedule for physician payment, as described above. While the law prescribed many of the procedures and methods to be used in development of the new fee schedule and in the transition from the old system to the new, discretion was left to the Secretary to resolve a number of key payment policy and technical issues. The model fee schedule presented here will list and explain these issues and describe steps that have been taken and will be taken toward resolution of these issues prior to implementation. On some issues we are taking a position at this time; on others we are presenting options without identifying a preferred approach.

Section 6102(f)(11) of Pub. L. 101-239 requires the Secretary of HHS to develop a model fee schedule, using the methodology set forth in section 1848 of the Social Security Act with respect to the actual fee schedule. The model fee schedule is to include ". . . as many services as the Secretary concludes can be assigned valid relative values." It is to be submitted to appropriate committees of Congress and made available to the public by September 1, 1990.

An important purpose of the model fee schedule is to provide an opportunity for interested parties to review and comment on the fee schedule and its underlying assumptions as it exists on September 1, 1990, well before it is actually used as the basis for Medicare physician payment, beginning in January 1992. Therefore, the report that follows attempts to be as current, accurate, and complete as possible in providing the best available estimates of relative values, geographic practice cost index values, and other information which may be helpful in gauging the effects of the new payment system. This model fee schedule is, nonetheless, far from a complete and final fee schedule for Medicare physician payment. Because many relative values and other important data will not be available until later and because many policy and methodological issues are not fully resolved, *all estimates in this report must be viewed as very preliminary. Many and perhaps all of the estimated payment amounts that can be derived from the tables provided in the addenda will change, perhaps significantly, before the actual fee schedule is published in 1991. In addition, estimates for many services cannot be provided at this time.*

C. Differences Between Model Fee Schedule and Actual Fee Schedule

Many of the expected differences between the model fee schedule published here and the actual fee schedule to be implemented on January 1, 1992 relate to the status of the work of the Harvard study team, which is far from complete. The September 1988 Harvard team report, on Phase I of their study, provided relative values for physician work for about 1400 physician services, representing about two-thirds of 1987 Medicare allowed charges. This model fee schedule is based entirely on these results. Relative values for most of the remaining physician services, which would bring the total up to about 95 percent of Medicare allowed charges, are expected to be provided in the second phase of the Harvard study. Some of those results are expected to be available in the fall of 1990 and the remainder at the end of the year.

In Phase II, the Harvard team is not only surveying additional physician specialty groups, but also resurveying several of the specialties already surveyed. Thus any and all of the 1400 physician work RVUs presently available may change and thousands of RVUs have yet to be provided. Further, we have entered into an agreement with the Harvard study team for a Phase III, which is intended to help fill in the remaining gaps in RVUs available for fee schedule implementation. The precise timing of Phase III is not final at this time.

In addition, the relatively short time between enactment of OBRA of 1989 and the statutory deadline for the model fee schedule (about 9 months) has not permitted us to resolve many important and complex policy and technical issues associated with the fee schedule. These issues, which are explained in detail in the chapters that follow, include reform of visit coding, a uniform global surgery definition, integration of the existing radiology and anesthesiology payment rules into the new fee schedule for physician payment and the precise methodology for the fee schedule conversion factor. When these issues are resolved, some model fee schedule values will have to be adjusted accordingly for actual fee schedule implementation. Many procedure values are omitted entirely from the model fee schedule because no reasonable process for estimations is available at this time.

Further differences between model fee schedule values and final fee schedule values will result from the availability of more recent data. The model fee schedule conversion factor was

computed using 1987 Part B Medicare Annual Data (BMAD) data "aged" to represent 1988; these data do not include any of the statutory payment changes since 1988. The final fee schedule conversion factor will be based on the latest data available prior to publication of the final fee schedule in October 1991. Similarly, the national average allowed charge for each service in 1991 needed to compute the charge-based overhead and malpractice RVUs was estimated for the model fee schedule using 1987 BMAD data. These data were used for the model fee schedule because they were readily available, having been used for previous analyses. Use of existing data facilitated timely completion of the model fee schedule. *The model fee schedule values presented here should be treated as very preliminary.* By the time of the actual fee schedule, more recent data will be available and will be substituted.

Finally, the model fee schedule does not reflect the effects of the fee schedule transition provisions, which blend the old payment rates with the new for many procedures during the period 1992 through 1995. Depending on the historical payment patterns in individual localities, physicians may receive the fee schedule payment for a service in 1992 or a payment amount somewhere between the fee schedule amount and the average allowed charge. The model fee schedule includes only the estimated fee schedule amounts. The transition provisions are detailed in chapter IV below.

D. Plans for Actual Fee Schedule Publication

The Department expects to publish a Notice of Proposed Rulemaking (NPRM) for the fee schedule regulation by April 1, 1991, followed by a 60 day comment period. Our target date for the final regulation is mid-October 1991. This date will allow us to incorporate the most recent available data and should also allow adequate time for the Medicare carriers, which process claims for physicians' services, to make final adjustments to their systems prior to implementation on January 1, 1992. A participating physician enrollment cycle is scheduled for calendar year 1992. As has been our practice in the past, we intend to send physicians a "Dear Doctor" letter informing them of the program changes, the upcoming participation decision and sending them fee schedule rates for their highest volume procedures as specified in section 1848(h). We also intend to allow physicians sufficient advance notice to allow them time to predict impact of the changes on their practices prior to making their participation decisions for 1992.

As discussed later, certain data needed for the fee schedule, such as relative values for very low volume codes, may not be available in time for publication in the NPRM. In these instances, we will provide information in the NPRM on the methodology we will use to obtain these data prior to the October 1991 final regulation.

The Department encourages written comments on the model fee schedule published here and will consider such comments carefully as we develop the NPRM. However, we do not plan to publish a summary of written comments with responses as part of the NPRM or respond to comments individually. Instead, written comments on the NPRM will be summarized with responses in the final regulation.

Chapter II—Description of the Fee Schedule

A. Physicians' Services to be Included in the Fee Schedule

Section 1848(a)(1) of the Act (added by section 6102 of OBRA of 1989) requires that payment be made under a Medicare fee schedule based on an RBRVS for "* * * all physicians' services (as defined in subsection (j)(3)), * * *." Subsection (j)(3) of section 1848 of the Act defines "physician services" for purposes of the Medicare fee schedule as including:

"items and services described in paragraphs (1), (2)(A), (2)(D), (3) and (4) of section 1861(s) (other than clinical diagnostic laboratory tests and such other items and services as the Secretary may specify)."

The services identified in the law are as follows:

1861(s)(1)—"physicians' services"; these services are limited to the professional services of physicians as defined in sections 1861 (q) and (r).

1861(s)(2)(A)—"services and supplies . . . furnished as an incident to a physician's professional service . . .;"

1861(s)(2)(D)—"outpatient physical therapy services and outpatient occupational therapy services;"

1861(s)(3)—"diagnostic X-ray tests . . ., diagnostic laboratory tests, and other diagnostic tests;" and

1861(s)(4)—"X-ray, radium, and radioactive isotope therapy, including materials and services of technicians;"

If the service is currently paid based on reasonable charges, then payment will be made under the Medicare fee schedule regardless of whether a physician or other entity (e.g., an independently practicing physical therapist) provided the service. While the statute would permit us to specify certain services for exclusion from the fee schedule, we have chosen not to do so. Except for medical supplies covered incident to a physician's professional service and services for which no national code has been established (e.g., new procedures), there will be a national fee schedule amount specified for each service.

Covered drugs will continue to be paid as an add-on to the bill for the service to which they are incident. (Otherwise, outpatient drugs continue to be excluded from Medicare coverage.)

Payment for medical supplies provided as an "incident to" the physician's total service will be included as part of the payment made to the physician for his or her professional service. Non-drug supplies can be viewed as part of the practice expense component of a service.

As indicated in our discussion of local codes in chapter III, new procedures will be coded using a local carrier-unique code and will be paid under the fee schedule using relative values determined by the carrier until HCFA establishes a national code and value for the service.

Services of Optometrists, Dentists, Oral and Maxillofacial Surgeons, Podiatrists and Chiropractors

Optometrists, dentists, oral and maxillofacial surgeons, podiatrists and chiropractors are considered to be physicians by Medicare when they provide services specified by section 1861(r) of the Act. These types of physicians are often called "limited license practitioners".

Because they are defined as physicians by section 1861(r) for a limited range of services, and because the Medicare fee schedule applies to "physicians' services", the Medicare fee schedule applies to them when they provide specific services for which the law considers them to be physicians. In addition, section 1848(c)(5) of the Act prohibits the Secretary from imposing different relative values or a different conversion factor ". . . for a physicians' service based on whether the physician furnishing the service is a specialist or based on the type of specialty of the physician."

The question that arises under the Medicare fee schedule is whether these categories of physicians provide the same services when they bill under a procedure code that is also used by doctors of medicine and osteopathy. With the exception of chiropractors,

who have their own unique code, our inclination at this time is to consider the service the same and to pay the same amount whether performed by an M.D., D.O., or limited license physician. We are, however, continuing to review available information on the comparability of these services and expect to consult with the PPRC, physician groups, and the carriers regarding this issue.

Services of Nonphysician Practitioners

There are seven categories of nonphysician practitioners for whom there is separate coverage and payment under Medicare. They are:

- Physician assistant (PA),
- Nurse practitioner (NP),
- Certified registered nurse anesthetist (CRNA),
- Nurse midwife (NM),
- Physical/occupational/speech therapist (PT/OT/ST),
- Psychologist, and
- Clinical social worker.

Medicare coverage and payment rules vary for each of these practitioners. Under current payment rules, all of these practitioners have their payment amounts limited in some way by the amounts paid to physicians for the same service, with the exception of PT/OT/STs. (Independently practicing PT/OT/STs have their own customary and prevailing charge profiles under the existing reasonable charge system and are not limited by physician payment levels.)

All of these practitioners will be affected by the Medicare fee schedule in 1992. First, section 1848(j) of the Act defines physicians' services for payment under the Medicare fee schedule as including outpatient physical and/or occupational therapy services. These services will therefore be paid under the fee schedule like all other physicians' services.

Second, the payment limitation percentages for the services of PAs, NPs, CRNAs, and NMs expressed in present law as a percentage of prevailing charges or fee schedule amounts paid to physicians are continued by law under the fee schedule. These percentages range from 65 to 100 percent depending upon the practitioner, the service, and the site of service.

Third, clinical psychologists and clinical social workers will receive payments computed as a percentage of physician fee schedule payment amounts. Section 6113 of OBRA of 1989 broadened coverage of the therapeutic services of clinical psychologists to all sites of service and added coverage of the services of clinical social workers. The law gives the Secretary the authority to establish a fee schedule for paying the services of clinical psychologists. We expect to issue proposed regulations in the near future that will provide a methodology for computing payment of therapeutic services of clinical psychologists. Section 1833(a)(1)(F) of the Act, enacted by section 6113 requires that payment for the services of clinical social workers be derived in part from an amount equal to 75 percent of the payment amount for clinical psychologists.

Section 6102(e)(7) of OBRA of 1989 requires the PPRC to conduct a study of the effects of the fee schedule on nonphysician practitioners. The PPRC is required to report on the results of this study by July 1, 1991.

Provider-Based and Teaching Physicians

In general a provider-based physician (PBP) is a physician who is compensated by a provider (hospital, skilled nursing facility, or comprehensive outpatient rehabilitation facility) for patient care services. Direct medical and surgical services furnished to an individual patient in a provider setting by PBP are currently paid under part B on a reasonable charge basis (or, in the case of radiologist services, under the radiologist fee schedule) like all other physicians' services. Except for certain PBP physicians practicing in hospitals with approved teaching programs, in constructing customary charges for PBP services where there is a compensation agreement for patient care services, the carrier is required by regulations to base the customary charges on the amount of compensation the physician receives for the direct patient care services. These are referred to as compensation-related charges.

For example, assume that a physician is paid $100,000 for his full range of services. It is determined that 50 percent of his time is spent in direct patient care, that he renders only one type of service (e.g., interpretation of EKGs), and that he performed 1,000 of these services in the most recent year. The physician's customary charge would be the amount of his compensation attributed to direct patient care, $50,000, divided by the number of services, 1,000, or $50. Prevailing charges would then be constructed according to the usual methodology using customary charges of all physicians practicing in the provider setting in the same locality.

Under the fee schedule, PBPs will be for direct medical and surgical services on the same basis as other physicians. *There will no longer be any need for computation of compensation related customary charges since customary charges will no longer be the basis for payment for physicians' services once the fee schedule becomes effective.*

Although converting from the current payment system to the fee schedule may affect the amount of payment for a PBP, it will not change the requirements that must be met for the services of PBPs to qualify for payment as physicians' services under part B. That is, payment for phsyicians' services to patients of providers will be payable under the fee schedule only if, as under the present reasonable charge system, the services are personally furnished for an individual patient by a physician; the services contribute directly to the diagnosis or treatment of an individual patient; and the services ordinarily require the services of a physician. (Additional specific requirements apply for radiology, anesthesiology, and pathology services.)

In the case of teaching physicians (i.e. physicians who involve interns and residents in the care of their patients), there is a set of special payment rules for determining customary charges. Under the fee schedule, the payment level for teaching physicians will be the same as for all other physicians since customary charges are no longer applicable. However, the current coverage requirements in the regulations and operating instructions for determining when a teaching physician can bill for services performed by an intern or resident under his or her supervision will be continued under the fee schedule. In general, a charge by a teaching physician will be recognized for services as an attending physician when interns and residents are involved in the care of the physician's patients only if his or her services to the patient are of the same character, in terms of responsibilities to the patient that are assumed and fulfilled, as the services the physician renders to other patients. This attending physician criterion for teaching physicians will remain in effect under the fee schedule. (That is, the fee schedule changes the amount that Medicare pays, but not the services for which it pays.)

Section 1861(b)(7) of the Act and implementing regulations (42 CFR 405.465(a) and 405.521(d)(2)) currently allow a hospital to be reimbursed on a cost basis for the direct patient care services of teaching physicians if certain conditions are met. While the language of OBRA of 1989 did not specifically repeal this cost election provision, continuation of this election option would appear inconsistent with the overall purpose of the physician fee schedule. Clarifying legislation may be

needed to resolve this issue prior to fee schedule implementation in 1992.

8. Formula for Computing Payment Amounts and Its Components

Under the formula in section 1848 of the Social Security Act, payment amounts for particular services under the physician fee schedule are the product of three elements—a relative value for the service, a geographic adjustment factor for the locality, and a nationally uniform dollar conversion factor (budget neutral for 1992). This general formula can be expressed as:

$Payment_{ij} = RVUt_i \times GAFt_{ij} \times CF$

where

RVUt = total relative value units for the service

GAFt = overall geographic adjustment factor for the locality

CF = uniform national conversion factor

$_i$ = service

$_j$ = locality

The law also specifies that the total geographic adjustment factor for a locality is the sum of three components, relating to the three components of the total RVU for a service. The three components are: (1) physician work; (2) practice expenses or overhead such as rent, staff salaries, equipment, and supplies, exclusive of professional malpractice liability insurance costs; and (3) professional liability insurance or malpractice costs. The physician work RVU must reflect the resources required to furnish the service, including time and intensity of effort. The overhead and malpractice RVUs are based on historical data for overhead as a fraction of total physician revenue, weighted by specialty, applied to estimated 1991 average allowed charges under the customary, prevailing, and reasonable charge methodology. Separate geographic practice cost indices (GPCIs) have been developed for the three components of the fee schedule. The GAF is equal to a weighted average of these three GPCIs, as established by section 1848(e) of the Act as added by OBRA of 1989. Thus, when the GAF is expressed as the sum of its three components, the formula becomes:

$Payment_{ij} = RVUt_i \times [(GPCIw_j \times w_i\%) + (GPCIoh_j \times oh_i\%) + (GPCIm_j \times m_i\%)] \times CF$

where

$GPCIw_j$ = geographic practice cost index value reflecting one-fourth of geographic variation in physician work applicable in the locality

$GPCIoh_j$ = geographic practice cost index value for overhead expense applicable in the locality

$GPCIm_j$ = geographic practice cost index value for malpractice expense applicable in the locality

$w\%_i$ = work percentage for procedure i

$oh\%_i$ = overhead percentage for procedure i

$m\%_i$ = malpractice percentage for procedure i

The work, overhead and malpractice percentages are the fraction of the total RVUs for a service represented by the work, overhead, and malpractice RVUs, respectively; they sum to 100 percent.

In effect, what this statutory formula accomplishes is separate adjustment of each of the three components of the total RVUs for each service by the value for the locality of a GPCI specific to that component. (The statute specifies, however, that only one-fourth of the geographic variation in physician work resource costs is to be taken into account in the formula.) Then the three GPCI-adjusted RVU values are summed to produce a total RVU value, which is converted into a dollar payment amount specific to that service and that locality by application of a uniform, national conversion factor stated in dollars. Thus, for ease of computation and understanding, we have transformed the original formula stated above into an algebraic equivalent as follows:

$Payment_{ij} = [(RVUw_i \times GPCIw_{ij}) + (RVUoh_i \times GPCIoh_j) + (RVUm_i \times GPCIm_j)] \times CF$

where

$RVUw_i$ = physician work relative value units for the service;

$RVUoh_i$ = overhead relative value units for the service;

$RVUm_i$ = malpractice relative value units for the service;

Sources of each of these elements of the payment formula are explained in detail in the sections below.

C. Sources of Relative Value Units

1. Physician Work RVUs

Harvard Study RVUs. As mentioned earlier, the physician work RVUs that form the basis of the fee schedule were developed by a research team at Harvard University under a cooperative agreement with HCFA. A complete discussion of the methodology and results of that study is contained in the Harvard team's report (Hsiao, Braun, and Becker et al., 1988, available through the National Technical Information Service. See Addendum D for ordering information for this and other major reports related to the physician fee schedule). In addition, the Harvard team presented a summary of the study in the *Journal of the American Medical Association* (Hsiao, Braun, Kelly, Becker, October 1988). A summary of the results is also provided in the Secretary's October 1989 Report to Congress on "Relative Value Scales for Physician Services."

In essence, the Harvard researchers constructed an RBRVS by investigating the physician resource inputs used to produce physicians' services. They spent most of their effort quantifying the amount of the physician's work involved in producing a service. In the first phase of their study, vignettes or descriptions of physicians' services were developed for 409 services performed by one or more of 18 specialties (not limited to Medicare covered services) and assigned to the appropriate *Physicians' Current Procedural Terminology* (CPT–4) codes. Then a national random sample of approximately 185 physicians in each of the 18 specialties was selected. About 100 physicians in each specialty evaluated services described by each vignette in terms of requirements of work, time, and intensity, which consists of technical skill and physical effort, mental effort, and stress due to risk. A process of magnitude estimation was used to obtain measurements of intraservice work (i.e., work for the procedure excluding pre- and post-service time) and its dimensions relative to a reference standard procedure in each specialty. (Magnitude estimation is a technique that rates each dimension in relation to a reference service using a ratio scale.)

The survey data were used to create scales of relative intraservice work for each of the specialties. Then the specialty scales were linked by identifying same or equivalent services provided by several specialties. This process reduced the number of scales from 18 to 1 while keeping the relationships within the individual specialties essentially unchanged. Finally, estimates of pre- and post-service work (e.g., post surgical hospital visits) were added to yield total work values for each of the surveyed services. Extrapolation was used to generate relative work values for roughly 1000 CPT–4 that were not actually surveyed but that were closely related to surveyed procedures. For example, Harvard used charge data to extrapolate from surveyed results such as for a 3 graft bypass procedure to obtain results for a 4 graft bypass procedure.

• *Services included in Harvard Study Phase I.* In Phase I the Harvard study team set out to develop an RBRVS for 18 specialties: anesthesiology, family practice, general surgery, internal medicine, obstetrics and gynecology, ophthalmology, orthopedic surgery, otolaryngology, pathology, radiology, thoracic and cardiovascular surgery, urology, allergy and immunology, dermatology, oral/maxillofacial surgery, pediatrics, rheumatology, and psychiatry. While only 372 unique

services were investigated through the surveys, by extrapolation the Harvard team developed physician work RVUs for a total of 1400 services. These 1400 RVUs represent about 1200 unique codes in CPT-4 with relative values assigned to combinations of procedure codes and modifiers to enlarge the number of unique services to 1400. These services represent approximately 69 percent of Medicare allowed charges for the included specialties and approximately 67 percent of all Medicare allowed charges. These RVUs form the basis for this very preliminary model fee schedule and were used in reports to Congress and by the Physician Payment Review Commission (PPRC) in its recommendations to Congress. These RVUs, along with related overhead and malpractice RVUs which will be discussed later, are listed at Addendum B.

• *Additional services and resurveyed services in Harvard Study Phase II.* The Harvard team has entered into a second cooperative agreement with HCFA in which it will expand on its work from Phase I. Fourteen additional specialties will be investigated in the second phase of this study: cardiology, emergency medicine, gastroenterology, hematology/oncology, infectious diseases, nephrology, neurology, neurosurgery, nuclear medicine, osteopathy, physical/rehabilitation medicine, plastic surgery, pulmonary medicine, and radiation oncology. As part of Phase II, HCFA is also funding resurveys of general surgery, internal medicine, and orthopedic surgery. Organizations other than HCFA are funding resurveys of dermatology, ophthalmology, pathology, and psychiatry. These RVUs should be available to the Secretary by December 1990, in time for inclusion in the NPRM.

In addition, the Society of Thoracic Surgeons has entered into an agreement with Abt Associates to develop RVUs for the services its members most frequently perform. These RVUs should also be available for consideration by the Secretary in the fall of 1990. This work could prove helpful to HCFA in refining the RVUs for thoracic surgery.

Obtaining RVUs for Other Procedures. Phase II of the Harvard study will provide RVUs for physician work for services that represent about 95 percent of Medicare allowed charges. We have recently awarded supplemental funds for Harvard to implement a Phase III wherein work values will be developed for the remaining CPT-4 codes and certain HCPCS alpha-numeric codes. We are also developing a charge-based relative value scale which could be reviewed by carrier medical directors and used for filling any remaining gaps (e.g., the values for the single covered chiropractic service or the several covered dental services not listed in CPT-4).

Refinement of Harvard Values

Section 1848(c)(2)(A) of the Act as added by OBRA of 1989 authorizes the Secretary to establish the relative values for the physician fee schedule after taking into account recommendations of the PPRC and consulting with organizations representing physicians. During Phase II of the Harvard project the methodological assumptions used in Phase I are being re-examined, particularly with respect to extrapolation. During Phase III Harvard will convene expert panels of physicians to "gap fill" values for low volume and new codes and to reexamine the relative values for all codes. We expect Harvard's recommendations for refinements in the physician work RVUs to be provided by June 30, 1991. We intend to provide further information about this process in the April 1991 NPRM.

PPRC plans to conduct a formal multi-step refinement process involving representatives from various physician organizations, HCFA, and Harvard researchers that will begin when Phase II of the Harvard study is complete in the fall of 1990. Specialty societies will be asked to identify problems related to the physician work relative values for surveyed services, to the cross-specialty links, and to the families of services and benchmark services used in the extrapolations. PPRC will also convene specialty-specific advisory panels of physicians to help it refine physician work RVUs developed through extrapolation. PPRC plans to complete most of the refinements by the summer of 1991.

Completion of these various RVU refinement efforts by June 30, 1991 is crucial if these refinements are to be considered for inclusion in the actual physician fee schedule to be phased in beginning in January 1992. This lead time is necessary to allow calculation of the conversion factor and dissemination of the final fee schedule amounts to the carriers in time for all necessary systems changes and other preparations for the January 1, 1992, effective date.

RVUs for Limited License Practitioner Services

Although limited license practitioners perform many of the same services as M.D.s and D.O.s and bill using the same codes, some codes are unique to the limited license practitioners. For codes that overlap with those of M.D.s and D.O.s, we either have physician work RVUs from Harvard Phase I or expect to receive them as part of Harvard Phase II or subsequent work. One of the limited license specialties (oral surgery) was surveyed as part of Harvard Phase I. A few limited license practitioner services that are covered by Medicare are outside the CPT-4 coding system and presently paid under HCFA-developed alphanumeric HCPCS codes (e.g., manipulation of the spine by a chiropractor).

Harvard will provide RVUs for services performed by doctors of medicine, doctors of osteopathy and for a few services performed by oral surgeons. These RVUs will apply to all physicians who perform these services (e.g. podiatrists, optometrists). As discussed in more detail under *Obtaining RVUs for Other Procedures*, we expect to establish payment amounts for services for which Harvard does not provide RVUs through other means.

Treatment of Radiology Services

• *Existing Fee Schedule Based on ACR-Provided Values.* Section 1848(b)(2)(A) of the Act, as added by OBRA of 1989, acknowledges that special rules are already in effect with respect to payment for radiologist services. Under the provisions of Public Law 100-203 (OBRA of 1987), later amended in part by provisions of Public Law 100-360 (the Medicare Catastrophic Coverage Act of 1988), payment for certain radiological services furnished on or after Janauary 1, 1989 was to be equal to 80 percent of the lesser of the actual charge for the services or the amount set under a new radiologist fee schedule. The radiologist fee schedule applies to radiology services (as defined by regulation) performed by board-certified or board-eligible radiologists or any other physician for whom radiology services account for at least 50 percent of the total amount of charges made by the physician for Medicare Part B services. (The radiology services of other physicians continue to be payable under the customary, prevailing, and reasonable charge methodology, although, effective April 1, 1990, payment for over 90 radiology procedures is limited to the radiologist fee schedule amount under the "designated specialty" provision. Imposed by section 1842(b)(15) of the Act as added by OBRA of 1989, this rule is applied in carrier localities in which prevailing charges differ by physician specialty.)

Radiologist fee schedule values are based on a relative value scale

developed by the American College of Radiology, which conducted both surveys of radiologists and a consensus panel process for refinement and extrapolation of the survey-generated values. The conversion factor for the radiologist fee schedule varies by carrier locality, reflecting historic charge patterns—the best proxy for a geographic practice cost index available at the time of implementation. As required by law, the initial fee schedule conversion factors were developed so as to produce total payments for the radiologists under the fee schedule that were 3 percent less than would have occurred under a continuation of the customary, prevailing, and reasonable charge system. Thus the radiologist fee schedule was budget neutral less 3 percent, locality by locality. OBRA of 1989 further reduced conversion factors by 4 percent in 1990. Future updates in payment amounts were to be based on the percentage increase in the Medicare Economic Index (MEI).

• *Integration of Existing Radiologist Fee Schedule into OBRA of 1989 Physician Fee Schedule.* In establishing the overall physician fee schedule, section 1848(b)(2)(A) of the Act (added by section 6102 of OBRA of 1989) specifies for radiology services that "the Secretary shall base the relative values on the (existing radiologist fee schedule), with appropriate modifications of the relative values to assure that the relative values established for radiology services which are similar or related to other physicians' services are consistent with the relative values established for those similar or related services". This language indicates that while the relationships among the radiology service RVUs established in the existing fee schedule are to be preserved, the entire radiologist fee schedule is to be rescaled to link radiology services to equivalent nonradiology physician services in the overall physician fee schedule, which is based primarily on the Harvard study physician work relative values.

We see two general approaches to this rescaling: (1) Rescaling the entire radiologist fee schedule across the board, or (2) rescaling major categories of radiology services separately. In order to do this rescaling, we must first determine what value from the existing radiologist fee schedule is equivalent to the Harvard physician work RVU for a given service. This determination is complicated by the fact that radiology services have professional and technical components and may also be billed globally. Briefly, the "professional component" of a service is the professional service provided by the physician (e.g., reading a chest x-ray), while the "technical component" includes the specialized supplies, equipment and staff that are necessary to do the service (e.g., the creation of the film to be read).

Because of this complexity, a plan for crosswalking from the existing radiologist fee schedule components (global, professional, and technical) to the new physician fee schedule components (physician work, overhead, and malpractice) must be developed in order to integrate the existing fee schedule values into the new system. Our plan is explained in chapter IV. For example, rescaling under either approach could be done in a manner similar to the following simple example, which uses the average RVU as the base. In practice, we would probably use a weighted average based on allowed charges.

PHYSICIAN WORK RVU

Code	Existing fee schedule	Harvard study
a	2	1
b	5	2
c	9	3
Mean	5.3333	2

Convert RVUs for existing fee schedule to Harvard scale as follows:

(1) Standardize current RVUs by dividing scale by mean RVU;

a 0.375
b 0.9375
c 1.6875

then, (2) place all values on Harvard scale by multiplying by Harvard mean RVU of 2.

a 0.75
b 1.875
c 3.375

Unresolved Coding Issues

There are several unresolved issues associated with the current Medicare fee schedule for radiologist services that result from differing past payment practices among carriers under the reasonable charge system. Some of these divergent payment practices were continued on a temporary basis under the initial implementation of the radiologist fee schedule with the understanding that standard payment procedures would be established at a later date. We will need to standardize these policies as a part of physician fee schedule implementation.

One area of divergent payment practices involves interventional radiological services. Many interventional radiological procedures have dual CPT-4 codes differentiating between the "complete procedure" (the radiological aspect of the procedure plus the injection of contrast materials and other pre-injection and post-injection services) and the "supervision and interpretation (S&I)" portion (the radiological aspect) of the complete procedure.

Under the CPT-4 coding descriptions, when a physician furnishes all aspects of the interventional procedure, the physician should use the complete procedure code in billing for the procedure. However, where the complete procedure is furnished by a radiologist-nonradiologist physician team, the S&I code should be used for the radiological portion of the procedure while the other services are billed using nonradiological codes. Thus, the latter services are payable on a reasonable charge basis even though the S&I portion of the complete procedure became payable under the radiologist fee schedule beginning April 1, 1989.

In the process of developing payment procedures for the radiologist fee schedule, HCFA discovered that the individual practices of Medicare carriers varied in the application of these codes. Some carriers permitted or required radiologists who performed complete procedures not to bill the single complete procedure codes. Therefore, those physicians split their billings between the S&I radiologic codes and surgical or other nonradiologic codes even though they furnished the complete procedure. The national organizations representing physicians who furnish interventional procedures strongly advocated the continuation of this component-part billing and the exclusion of complete procedure codes under the radiologist fee schedule. It was decided that individual carriers' past practices regarding the strict application of the CPT-4 coding descriptions would be continued during the first year of the radiologist fee schedule. Subsequently, section 6105(c) of P.L. 101-239 required that this "freeze" policy on component-part billing continue to be applied in 1990 on the same basis as it was applied in 1989.

We intend to propose our approach to standardizing payment procedures on interventional radiological services in the proposed rule on the Medicare fee schedule. Our main concern will be that, in the chosen option, Medicare will pay the same amount for the services

furnished regardless of how the services are billed.

A second area of divergent payment procedures under the radiologist fee schedule involves payments for the delivery of radiation therapy services that recognize the type of equipment used in treating individual patients. The CPT-4 coding system has not generally based its procedure descriptions on the type of radiation therapy equipment used. (Essentially, this is an issue that affects payments only for the technical component of these procedures since the professional component services are largely unaffected by the equipment used.)

In the past, several carriers, primarily located in one area of the country, instituted local codes that specified the type of equipment for use in paying for radiation therapy services. Because of the long-standing status of those local codes, certain carriers who factored them into the radiologist fee schedule conversion factor calculations were permitted to continue to recognize them for payment purposes. The use of these local codes was restricted to freestanding radiation therapy centers that billed only for the technical component of radiation therapy services. In general, no other equipment-specific differentials are made.

Since the use of local codes except in very limited circumstances is incompatible with a national payment system, we plan to propose an approach to standardizing payment policy for radiation therapy services in the Medicare fee schedule proposed rule. The options are a uniform payment amount without an equipment-specific differential or national codes and relative value units that provide for such differentials in payment amounts. If the latter option is selected, the payments will be based on the level at which the equipment is used with respect to an individual patient rather than the overall capacity of the unit, since the most powerful units can provide the lower-range services as well as the highest.

Treatment of Anesthesia Services

• *Existing Relative Value Guide and Payment Methodology.* Anesthesia services are paid on the basis of a reasonable charge that is determined by multiplying a reasonable charge conversion factor by the sum of allowable base and time units. The base unit is a specific numerical value assigned to the anesthesia procedure. The time unit is calculated from the amount of "anesthesia time" assigned with the anesthesia procedure.

Prior to March 1, 1989, each carrier was allowed the choice of relative value scale which led to considerable variation across the carriers in the number of base units allowed per procedure. In addition, with the exception of a few carriers, surgical codes, not anesthesia codes, were used to report anesthesia services. Section 4048 of OBRA of 1987 mandated that the Secretary develop a uniform relative value guide for physician anesthesia services. Consistent with this requirement, a uniform guide was developed and implemented effective March 1, 1989.

Under the uniform relative value guide, each CPT-4 anesthesia code is assigned a base unit value. There are approximately 250 anesthesia codes. The number of base units varies from a low of three units for a procedure such as anesthesia for biopsy of clavicle to a high of 30 units for anesthesia for a liver transplant. The base unit reflects the value of all physician anesthesia services except the time actually spent in anesthesia care. The base value includes usual preoperative and post-operative visits, the administration of fluids and/or blood incident to the anesthesia care and monitoring procedures. The base unit for an anesthesia procedure that is medically directed by a physician differs from the base unit for an anesthesia procedure that is personally performed. For anesthesia procedures furnished on or after April 1, 1988 but before January 1, 1991, the base unit is reduced by 10 percent for each of two concurrent medically directed procedures, by 25 percent for each of three concurrent medically directed procedures, and by 40 percent for each of four concurrent medically directed procedures. Medical direction refers to the situation where an anesthesiologist provides medical direction to qualified anesthesists who actually administer anesthesia.

Anesthesia time starts when the physician or anesthetist begins to prepare the patient for induction and ends when the patient may be safety placed under post-operative supervision of others and the physician or anesthetist is no longer in personal attendance. The number of allowable time units is calculated by dividing anesthesia time by a denominator of 15 or 30 minutes. The denominator of 15 minutes is used where the physician personally performs the anesthesia procedure. The denominator of 30 minutes is used where the physician medically directs concurrent anesthesia procedures involving qualified anesthetists. As a result of section 1842(q)(2) of the Social Security Act, as enacted by section 6106 of OBRA of 1989, only the actual time of the fractional time unit is allowed for anesthesia services furnished on or after April 1, 1990. Previously, a fractional time unit was considered a full time unit.

The following examples describe how the reasonable charge is determined for an anesthesia procedure that is personally performed and an anesthesia procedure that is medically directed by a physician on or after April 1, 1990.

Example 1

An anesthesiologist personally performs an anesthesia procedure that is assigned 8 base units. The "anesthesia time" associated with this particular procedure is 1 hour and 10 minutes, or 70 minutes. The anesthesiologist charges $455. The anesthesiologist's customary charge conversion factor is $30 and the prevailing charge conversion factor is $20. The reasonable charge is $254 or $20 × (8 + 4.7 units). (The amount of 4.7 units is calculated by dividing anesthesia time of 70 minutes by 15 and rounding to one decimal place.)

Example 2

An anesthesiologist medically directs two concurrent anesthesia procedures. One of these procedures is assigned 10 base units. The anesthesia time associated with this particular procedure is 2 hours and 40 minutes or 160 minutes. The anesthesiologist charges $528. The anesthesiologist's customary charge conversion factor is $32 and the prevailing charge conversion factor is $22. The reasonable charge is $314.60 or $22 × (9 + 5.3 units). (The amount of 5.3 time units is calculated by dividing anesthesia time of 160 minutes by 30 and rounding to one decimal place. The amount of 9 base units is calculated by reducing the assigned base unit of 10 units by 10 percent, the percentage reduction factor for two concurrent medically directed procedures.)

The provision of anesthesia services may involve general or monitored anesthesia care (MAC). Under MAC, a patient may be anesthetized by the surgeon or anesthesiologist, using a local or regional anesthetic, while the anesthesiologist continually monitors or medically directs the monitoring of the patient's condition. Payment for medically necessary MAC services is made in the same manner as for general anesthesia.

The OIG has prepared a draft report entitled, "Medicare Coverage and Reimbursement for Monitored Anesthesia Care." This report makes the following recommendations:

• Require carriers to develop and implement a claims review process to apply existing MAC coverage instructions;

• Strengthen MAC coverage guidelines through consultation with medical specialty societies;

• Study the appropriateness of paying the same amount for MAC and general anesthesia.

We are reviewing the OIG recommendations and determining what changes, if necessary, need to be made to our current instructions.

• *Integration of Anesthesia Services into the Physician Payment System.* Section 1848 of the Social Security Act contains a specific provision governing payment for anesthesia services under the physician fee schedule. Section 1848(b)(2)(B) requires that the Secretary shall use, to the extent practicable, the uniform relative value guide, with appropriate adjustment of the conversion factor, in a manner to assure that the fee schedule amounts for anesthesia services are consistent with the fee schedule amounts for other services determined by the Secretary to be of comparable value. In addition, the Secretary shall adjust the anesthesia conversion factors by geographic adjustment factors in the same manner as the adjustment is made for other physician services.

The inclusion of actual time is unique to anesthesia services. The preamble to the January 26, 1989 proposed regulations to implement the uniform relative value guide announced that the separate time unit element of the anesthesia payment system would be eliminated within 2 years of the effective date of the final rule implementing the uniform relative value guide. (The final rule has not yet been published.) The reason for this was in part, concern that the definitions of when anesthesia time "begins" and "ends" is not precise and that a system that reflects average time units per procedure would be simpler to administer and have less potential for abuse. On the other hand, anesthesiologists argue that the use of actual time is more equitable in that those anesthesiologists who work on more complex procedures or with "slow" surgeons are not penalized when a procedure takes longer than the average time. It is our judgment, however, that the payment system for all physicians is based on a system of averaging (i.e., that within a given procedure code, there will be some easy and some more difficult cases) and no persuasive data have been provided to us to support a conclusion that incorporating average time units per procedure anesthesia code will lead to inequitable results.

Another argument favoring the elimination of time is the complexity that is involved in integrating the anesthesia relative value scale into the overall RBRVS. We have concluded that if anesthesia time units are to be retained, the following process is needed to integrate anesthesia services into the overall physician payment system. Note that this requires separate conversion factors for anesthesia.

Method for Integrating Anesthesia Services Retaining Time Units

1. Compute a conversion factor under the physician payment system for all physicians' services, anesthesia and non-anesthesia alike, based on the Harvard work values. Phase I of the Harvard study developed work values for 23 anesthesia services. Anesthesia allowed charges for these 23 anesthesia services will be weighted to represent total allowed anesthesia charges.

2. Compute the payout under the physician fee schedule for the work component of physician anesthesia services.

3. Compute the amount of the payment adjustment percentage for the work component of physician anesthesia services. The percentage adjustment will be determined based on the difference between payment for the work component of physician anesthesia services allowed under the reasonable charge system and payment for the work component of physician anesthesia services allowed under the fee schedule.

4. Divide each locality level conversion factor into three component amounts using anesthesiology-specific component weights for work, malpractice and overhead. Reduce the work component of the locality conversion factors by the adjustment factor. The practice component and the malpractice component remain unaffected and are passed through. (The work component weight will have been adjusted to reflect the payment adjustment for anesthesia services.) Deflate each of the three components by dividing the specific component by its appropriate geographic index. Sum the components.

5. Compute a national index adjusted conversion factor by weighting each locality indexed adjusted conversion factor by its total allowed units for a period of time.

6. For each fee schedule area, multiply the national index adjusted conversion factor by the sum of the products of the appropriate index and its specialty weight. The resultant amount is the fee schedule area anesthesia conversion factor.

Data Required To Eliminate Time

In order to eliminate time as a separate element of the payment process and to integrate the anesthesia relative value scale into the overall RBRVS, we would have to develop an average time per procedure for both personally performed and medically directed procedures. Research work is currently being conducted to develop these data. Assuming that this proves successful and data are available by early 1991, we are announcing our intention to propose the elimination of time units as part of the April 1991 NPRM.

The anesthesia relative value scale would then be integrated with the overall RBRVS as follows: From the average time unit per procedure, we would develop a combined base/time unit value per procedure. Such values would be adjusted to reflect the degree that the surveyed anesthesia services are over or underpriced on average and then integrated into the overall RBRVS.

• *Other Anesthesia Issues.* The uniform relative value guide covers only anesthesia services. During the provision of the anesthesia service, the anesthesiologist may furnish other services such as surgical and medical services. Examples of these services include the insertion of a Swan Ganz catheter, and the insertion of an arterial line or a central venous catheter. There is currently a lack of uniformity among carriers in how these services are paid. Some carriers do not recognize separate payment for these services when they are associated with the anesthesia procedure. These carriers view the anesthesia payment as representing payment for all anesthesia and related care services furnished by the anesthesiologist. However, other carriers do recognize separate payment for these services. Under the physician fee schedule, we will need to develop a standardized national policy regarding this issue.

Under one option being considered, we would require each carrier to recognize separate payment for these services. This would be consistent with the practice of the majority of carriers. This would require those carriers that do not currently recognize separate payment to decrease their conversion factors in order to allow separate recognition. Alternatively, we would require each carrier to include these services with the anesthesia payment. When these services are performed by an anesthesiologist in concert with the

anesthesia service, payment for these services would be included as part of the anesthesia fee. This would require those carriers that do currently recognize separate payments to increase their conversion factors. A problem with this approach would be how to adjust the anesthesia fee when a physician, other than an anesthesiologist, performs this service.

Treatment of Physician Pathology Services

In addition to requiring implementation of a resource-based fee schedule for physicians' services beginning in 1992, section 1834(f) of the Social Security Act, as enacted by section 6102(g) of OBRA of 1989 requires implementation of a fee schedule for physician pathology services. This provision is effective beginning January 1, 1991. Although OBRA of 1989 explained how radiology and anesthesia services would be incorporated into an overall resource-based fee schedule in 1992, it did not explain how the pathology fee schedule would be incorporated.

Phase I of the Harvard study included only a very limited survey of pathology. This is one of the areas being resurveyed by Harvard, and results are not anticipated until the end of 1990. We, therefore, have only partial and preliminary data on the resources required to provide physician pathology services. If we did develop a pathology fee schedule for implementation in 1991, it would probably be based on existing charge data because of the unavailability of the new Harvard data at this time. Payment amounts in such a fee schedule might bear no relationship to the resources required to provide the service.

Both the PPRC and organizations representing pathologists, such as the College of American Pathologists (CAP), have recommended that Congress reconsider requiring HCFA to establish a pathology fee schedule in 1991. They believe that physician pathology services should instead be included in the resource-based fee schedule in 1992 along with all other physician services, and no other fee schedule should be etablished for pathology prior to that time, given that Harvard's resurvey of pathology as part of its Phase II study will not be available until late this year. The Ways and Means Subcommittee on Health has approved a provision to repeal the pathology fee schedule for 1991. In expectation of forthcoming legislation, we have stopped work.

2. Charge-Based Computation of Overhead and Malpractice RVUs

While physician work RVUs are determined based on an RBRVS, section 1848(c)(2)(C) of the Act as added by OBRA of 1989 prescribes that the Secretary compute overhead and malpractice RVUs by applying historical practice cost percentages to a base allowed charge for each service. Essentially, the base allowed charge is the estimated 1991 national average allowed charge for a service. Historical charge data for 1989 will be adjusted to approximate 1991 charges, taking into account changes in payment rules between 1989 and 1991 and the most current definitions of units of service, such as the global surgical package definitions, restructured visit codes, etc.

The historical practice cost percentages will be computed as follows. First, the average percentage division of resources among the work, overhead, and malpractice components for each medical specialty (as defined by the Secretary) will be determined, using available national data. This type of data is compiled by the American Medical Association (AMA). HCFA has purchased the most recent data files available from the AMA. In addition, HCFA has in process a survey of physicians that will provide practice cost information by specialty. The PPRC is also conducting a survey to collect practice cost data. No final decision has been made as to the practice cost data that will be used to compute actual fee schedule RVUs. In computing the model fee schedule RVUs, practice cost data from a 1983 NORC (formerly the National Opinion Research Center, based in Chicago) survey were used. These 1983 NORC practice cost data are summarized in table 2.1.

Second, the proportion of each service (or class of services) performed by each specialty will be determined using recent part B claims data. As discussed under data options for fee schedule development, we expect to use 1989 BMAD data for this purpose in computing actual fee schedule values. The model fee schedule values shown in Addendum B were computed using 1987 BMAD data, updated to reflect 1988 payment rules.

Third, using this specialty-share information, an average overhead percentage and an average malpractice percentage will be computed for each service or class of services. (In the model fee schedule we have done these computations for individual services.) More precisely, the average overhead percentage for a service or class of services is defined as the sum for all specialties of the product of the average overhead percentage for each specialty times the proportion of that service performed by that specialty. The average malpractice percentage will be computed in the same way.

TABLE 2.1.—1983 PHYSICIANS' PRACTICE COSTS AS A PERCENTAGE OF GROSS REVENUE BY SPECIALTY

Specialty	Work (percent)	Overhead costs (percent)	Malpractice (percent)
Dermatology	54.2	43.8	2.0
Family Practice	51.6	44.5	3.9
General Surgery	52.2	38.0	9.8
Internal Medicine	52.9	43.6	3.5
Obstetrics & Gynecology	52.3	36.4	11.3
Ophthalmology	50.9	45.3	3.8
Orthopedic Surgery	42.1	49.0	8.9
Otolaryngology	49.3	43.5	7.2
Pathology	67.6	30.0	2.4
Radiology	57.4	38.3	4.3
Thoracic Surgery	57.0	32.3	10.7
Urology	50.5	43.5	6.0
Total	54.5	39.9	5.6

Note: Work percentage was calculated as 100% less the overhead costs and malpractice percentages. These are the practice cost percentages used for the model fee schedule. Data for additional specialities will be included in producing the actual fee schedule.

Source: 1983 NORC Physician Practice Cost Survey.

For example, consider the computation of a practice cost percentage for drainage of an eyelid abscess. Assume that this service is performed 20 percent of the time by family practitioners and 80 percent of the time by ophthalmologists. Further assume that on average family practitioners' overhead expenses are 44.5 percent of total revenues and ophthalmologists' overhead is 45.3 percent of total revenues. The average overhead percentage for this service would then be

$(44.5\%)(.2)+(45.3\%)(.8)=45.1$ percent.

The final step in computing overhead and malpractice RVUs is to multiply the average overhead or malpractice percentage for a service by the base allowed charge for that service. For the service described in our example, the overhead percentage of 45.1 percent could be applied to a hypothetical $100 base allowed charge to yield an overhead RVU of 45.1. A parallel computation would yield a malpractice RVU on the same scale.

3. Combining Work, Overhead, and Malpractice RVUs onto a Common Scale

Once the separate work, practice expense and malpractice RVUs are computed for each service, they must be

combined in a manner to produce a single relative value for each service, as required by section 1848(c)(2)(A). As explained above, the work RVU is initially scaled in units selected by the Harvard RBRVS study whereas the overhead and malpractice RVUs are initially computed in dollar units. The requirement to combine these RVUs on a common scale requires either that the work RVUs be converted to dollar units or that the overhead and malpractice RVUs be converted to Harvard RVUs. The choice is arbitrary because ultimately the conversion factor is applied to either unit scale to provide the dollar payment amount. Once converted to a common scale, all three relative value units can simply be summed to provide a single RVU per service.

For this model fee schedule we have chosen to convert Harvard work RVUs to dollar units.[1] This was done by multiplying Harvard work RVUs by a conversion factor specific to the work component. This work conversion factor is computed by dividing allowed charges currently allocated for work (i.e., average work percentage applied to allowed charges across all services provided by all physicians) by the sum of all work RVUs for these services. Thus, the work conversion factor when multiplied by the Harvard work RVUs for any service yields a new work RVU value for the service expressed in dollars. This dollar-based work RVU value can be added to the overhead and malpractice RVUs for the service to produce a total RVU for that service. Further details regarding our methodology for combining all three RVUs onto a common scale are provided in Addendum A.

4. Updating the Relative Values

Section 1848(c)(2)(B) of the Act as added by OBRA of 1989 calls for a periodic review and updating of the relative value units for work, overhead, and malpractice. At least once every five years, the Secretary is required to adjust the relative values to take into account changes in medical practice, coding changes, new data on relative value components, or the addition of new procedures. However, the adjustments for any year may not cause the amount of expenditures for physicians' services under Medicare Part B to differ by more than $20 million from the amount that would have been made in the absence of RVU adjustments.

[1] No final decision has been made on dollar-based RVUs vs. Harvard scale RVUs for purposes of the actual fee schedule NPRM.

Once the tight timetable for implementing the fee schedule by January 1, 1992 has been met, the process for annual adjustments and updating of the relative values can begin. Modifications of the fee schedule will be made after consultation with professional medical organizations and PPRC. Various physician organizations have expressed an interest in participating in this process.

D. Geographic Practice Cost Indices

Section 1848(e) of the Act requires the Secretary of HHS to develop geographic adjustment factors (GAF) for existing payment localities to be used in computing the Medicare fee schedule. It requires an index to reflect the relative cost of practice expenses other than malpractice compared to the national average; an index to reflect the relative cost of malpractice compared to the national average; and an index to reflect one-quarter of the relative value of physicians' work compared to the national average. Components of such a geographic adjustment factor were already under development as a result of OBRA of 1986 which required the Secretary to develop an index to measure "justifiable" geographic differences in physicians' costs of providing services by December 31, 1989. As a result of this provision, alternative geographic practice cost indices (GPCI) were developed by the joint efforts of the Urban Institute and the Center for Health Economics Research (UI/CHER). The final report from UI/CHER on GPCIs was delivered to HCFA in June 1989.[2]

Indices were developed which measure the relative differences in the cost of a "market basket" of goods across areas by comparing the area cost to the national average. In this case, the "market basket" consists of the resource inputs required to operate a private medical practice. The inputs and their average weights across all specialties were obtained from the American Medical Association's *Socioeconomic Characteristics of Medical Practice* 1987. The input components and their weights are as follows:

Input component	Percentage of practice costs
Physician Work (Net Income)	54.2
Employee Wages	15.7
Office Rents	11 1
Medical Equipment, Supplies, and "Other" Expenses	13.4
Malpractice	5.6
	100.0

[2] *The Geographic Medicare Economic Index: Alternative Approaches:* W. Pete Welch, Stephen Zuckerman, Gregory Pope; June 1989, and September 1989 and March 1990 supplements.

Once the components and their weights were determined, a data source had to be found to measure the cost of each of the components in a given area compared to the national average. Because it would be prohibitively expensive to collect the detailed locality level data needed, data sources were limited to readily available already existing sources. Proxies were selected for each component as follows:

• *Physician work*—The average hourly earnings of workers, based on a 20 percent sample of 1980 census data, in professional specialty occupations (teachers, engineers, etc.) with 5 or more years of college. Adjustments were made for occupational mix in each area. The actual reported earnings of physicians were not used to adjust geographical differences in fees because these fees are, in large part, the determinants of the earnings, i.e., using physician earnings would be "circular."

• *Employee wages*—Wages of clerical workers, registered nurses, licensed practical nurses, and health technicians, also based on a 20 percent sample of 1980 census data.

• *Rents*—Apartment rental data produced annually by the U.S. Department of Housing and Urban Development were used because there were insufficient data on commercial rents.

• *Malpractice*—Rates, by State, for a "claims made" policy (i.e., a policy that covers malpractice claims during the covered period) providing $100,000/$300,000 of coverage were used. In States with differential rates among areas, the weighted average for the State was used. Data were collected on premiums for general practitioners who do not do surgery (low-risk), general surgeons (moderate risk), and orthopedic surgeons (high-risk). A "Medicare-weighted" risk group premium was then created according to the share of Medicare spending accounted for by each risk class.

• *Medical equipment, supplies, and "other" expenses*—UI/CHER determined that this component is represented by a national market and costs do not vary appreciably among areas. This component's index is 1 for

all areas to indicate no variation from the national average.

The areas selected for measurement purposes were the Metropolitan Statistical Area (MSA). Non-MSA areas within a State were aggregated into one rural area. MSAs satisfied the criteria of (1) homogeneity in input prices within the area, and (2) size large enough so that market areas are self-contained to minimize border crossing; i.e., physicians would not move their offices a few miles to secure higher payment and patients would tend to receive services within their area. Section 1848 (e) and (j) require, however, that geographic adjustments be made according to existing Medicare payment localities (see "Locality" section in Chapter III). Where localities crossed MSA boundaries, MSA indices were coverted to Medicare locality indices by population weight.

As mentioned earlier, for fee schedule computation, section 1848(e) requires a GPCI which reflects three separate components as follows: work, overhead exclusive of malpractice, and malpractice. Using the indices for Birmingham, Alabama as developed by UI/CHER, the components as required by section 1848(e) would be computed as follows:

Locality	Indices				
	Work	Wages	Rents	Other practice expenses	Malpractice
Birmingham, AL	0.924	0.947	0.761	1.000	0.826

• *Work*—As specified in section 1848(e)(1)(A)(iii) of the Act, added by OBRA of 1989, the work index value reflects one-fourth of the difference between the relative value of physicians' work effort in a particular locality and the national average. (The index is constructed such that a value of 1 represents the national average.)

$$\text{Work} = 1 - [1.924](.25)]$$
$$= (.75)(1) + (.25)(.924) = .981$$

• *Overhead exclusive of malpractice*—This would mean combining the values of wages, rents, and other expenses (including medical equipment and supplies) and dividing by their total national weight.

$$\text{Overhead} = \frac{(.157)(.947)+(.111)(.761)+(.134)(1)}{.157+.111+.134} = .913$$

• *Malpractice*—This would simply be the malpractice index.

The GPCI components for purposes of determining payments under the fee schedule for Birmingham, AL would look like this:

Locality	Work	Overhead	Malpractice
Birmingham, AL	0.981	0.913	0.826

A preliminary list of the GPCIs for all current Medicare localities in the form required by section 1848(e) of the Act can be found at Addendum C. GPCIs for malpractice are presently being evaluated for further refinement. Some changes may be made in the malpractice index if more recent data and additional information on State malpractice insurance requirements are available. Changes in the work and overhead indices are not likely to be made until 1990 census data become available. The PPRC is required to report to Congress by July 1, 1991 on the appropriateness of existing geographic localities and on a number of GPCI issues, including the extent to which existing GPCI indices accurately reflect practice costs and malpractice costs in rural areas.

As explained earlier in this chapter, the national level RVUs for each component—work, overhead, malpractice—will be multiplied by the respective locality level GPCI and summed to arrive at a total GPCI adjusted relative value. This total will then be multiplied by the national conversion factor to arrive at a fee schedule amount for each service within each locality.

In summary, for the GAF to be used in the Medicare fee schedule, HCFA will use the work performed by UI/CHER. The GAF defined by section 1848(e) uses separate geographic indices for work, practice costs, and malpractice costs. The geographic work index and the geographic malpractice index are derived by measuring the variation of costs in fee schedule areas from the national average for these factors based on the data described above. The practice cost index is derived by weighting and combining the fee schedule area variations from the national average for employee wages, office rent and equipment, and "other" expenses. The GAF for a procedure in a locality is constructed by multiplying these component GPCIs for work, practice costs, and malpractice costs by the percent of the relative value for the procedure allocated to work, practice costs, and malpractice costs, respectively.

E. Conversion Factor

Initial Computation

The conversion factor is a multiplier which transforms relative values into payment amounts. The conversion factor is a single national number which applies to all services paid under the fee schedule. Section 1848(d)(1)(B) of the Act, as added by OBRA of 1989, specifies that the conversion factor for the first year of the fee schedule must be budget natural, i.e., the conversion factor must produce total payments under the fee schedule that are the same as total payments that would have occurred had the current payment rules (generally based on the reasonable, customary, and prevailing methodology) continued.

We will compute the initial conversion factor by dividing the total actuarially estimated 1991 payments for physician services under the current payment system by the total number of RVUs expected to be provided in 1991 (expected frequency per service multiplied times total RVUs per service,

summed across all services). This computation will need to take into account the effect of the GPCI adjustments in order to produce a budget neutral conversion factor. The GPCI adjustments will affect budget neutrality because different volumes of services are provided in each geographic area. As prescribed by the statute, this conversion factor, computed using predicted 1991 expenditures, will be updated by the 1992 annual update factor to establish the initial fee schedule conversion factor. Also, payments for some services established by this initial conversion may be adjusted during the 1992–1995 fee schedule transition period. This issue is described in detail below.

The one possible exception to the general principle that all payments are to be based on a single national conversion factor may be anesthesia services as discussed earlier in this chapter in the section on Physician Work RVUs [on page 21.]. It may be necessary for these services to have a separate conversion factor if we retain the use of time in determining payment.

Subsequent Conversion Factor Computation Accounting for Transition Payment Limit

The following summary describes the transition rules as prescribed in OBRA of 1989 *before* any adjustment is made to restore budget neutrality for 1992 (required in OBRA of 1989 in section 1848(d)(2)(E)).

Summary of Transition Provisions. Under the transition rules, the fee schedule will be phased in from 1992 to 1996. The phase-in begins with the computation of an adjusted historical payment amount for each service in each area. This is defined as the weighted average prevailing charge in the area in 1991 with consideration of customary charges below the prevailing and other payment limitations. (For radiology services subject to the radiologist fee schedule, 1991 fee schedule amounts will be substituted for prevailing charges). This historical payment amount is in effect an average allowed charge across all physicians in all specialties performing a given service in a locality and will reflect any legislative changes which affect 1991 payments. The transition rules for 1992–1995 involve comparing this historical payment amount with the new fee schedule amount. It is important to remember that the effect of these rules on payments to individual physicians will depend on their own historical charging patterns. These transition rules take into account only the *average* allowed charge for a service in the locality, not an *individual* physician's charges under the old payment system.

If the historical payment amount for a service in a locality is between 85 and 115 percent of the fee schedule amount, maximum payment to all physicians in that locality will be at the fee schedule amount in 1992. However, if the historical payment amount is below 85 percent of the fee schedule amount, the payment amount for the service will be the historical payment amount plus 15 percent of the fee schedule amount. On the other hand, if the historical payment amount is more than 115 percent of the fee schedule amount, the payment amount in 1992 will be the historical payment amount minus 15 percent of the fee schedule amount.

These rules do *not* limit increases or decreases in 1992 to 15 percent of the historical payment amount as the short title of section 1848(a)(2)(A) of the Act implies. Rather, for services subject to the transition provisions, increases and decreases will be limited by a fixed dollar amount (i.e., 15 percent of the new fee schedule payment). Thus, increases can be more than 15 percent of the historical payment amount while decreases will always be less than 15 percent. A service will receive a higher percentage increase the farther its historic payment basis is below the fee schedule amount or a lower percentage decrease the farther its historic payment basis is above the fee schedule amount.

During the years 1993 to 1995, payment amounts for services subject to the transition provisions in 1992 will be brought closer to the fee schedule amount through application of a blended formula as follows:

- In 1993, payment will equal 75 percent of the amount determined for 1992 increased by the update for 1993, plus 25 percent of the full fee schedule amount.
- In 1994, payment will equal 67 percent of the amount determined for 1993 increased by the update for 1994, plus 33 percent of the full fee schedule amount.
- In 1995, payment will equal 50 percent of the amount determined for 1994 increased by the update for 1994, plus 50 percent of the full fee schedule amount.

In 1996, payment for all services will be equal to the fee schedule amount.

Note that those nonphysician practitioners who receive payment computed as a percentage of a physician fee schedule amount (see [Services of Nonphysician Practitioners in Chapter II A.] will be affected by the transition rules if the physicians in their localities performing the same services are affected by the transition rules. In other words, if a nonphysician practitioner is to receive a percentage of what the physician would be paid for the service in that locality, then the nonphysicians' payment amount will be computed as a percentage of the physician's payment after any applicable transition rules had been applied.

Budget Neutrality and the Transition Rules

OBRA of 1989 does not specify how the application of these transition rules for 1992 is to be reconciled with the budget neutrality requirement for 1991. Through an iterative process, we can compute a conversion factor resulting in payment amounts for 1992 which are budget neutral with 1991 expenditures and which meet the transition requirements. However, we find that program savings are likely to be derived in years after 1992 when the prior year's payments are blended with the full fee schedule amount. This is a result of the implementation mechanism prescribed by the legislation. Preliminary analysis suggests that some savings will result relative to a budget neutral baseline; however, a definitive analysis of the impact is not possible until all of the relative values, global fee definitions, and other factors are established. It thus remains possible that the budget impact could be minimal.

We have not been able to find any alternative way of computing the conversion factor which preserves budget neutrality throughout the transition and which does not violate the statutory transition requirements. We would note that there is no statutory requirements for the fee schedule to be budget neutral for subsequent years and that this phenomenon of the transition is recognized by both the Congressional Budget Office (CBO) and PPRC. We would further note that any expected "savings" occurring in years after 1992 may not materialize because of possible responses to fee schedule implementation by physicians and/or beneficiaries. An adjustment to account for these responses is discussed in the next section and is limited to 1992 only.

Complexity of the Budget Neutrality Computation

As described previously, the statute requires the Secretary to determine an initial conversion factor that is budget neutral relative to what Medicare expenditures would otherwise be without the fee schedule. The initial conversion factor is critically important because it is the base from which all future updates will be made.

Budget neutrality requires data on: (1) Fees for each procedure in each area (adjusted by the GPCI), consistent with application of the transition provisions, and (2) estimates of the frequency with which each procedure is performed.

Implementation of the fee schedule will involve changes in several important aspects of Medicare payment. Not only will there be changes in Medicare fees, but there will also be simultaneous changes with respect to the uniform definition of services for surgical global fees and medical visits. (These services account for more than 70 percent of Medicare physician dollars). For example:

• The uniform definition of surgical global fees will specify which preoperative, intraoperative and post-operative procedures are included in the global fee and which can be billed separately. Currently, carriers have their own definitions. We expect that there will be many services that are now contained in global fees (or which are otherwise not now billed), that will be billed separately under the fee schedule.

• Some options being considered for changing the coding system for medical vistis (e.g., incorporation of time in code definitions) represent a major change from the current system. When visit coding is changed to a uniform system, projections will need to be made on what the distribution of frequencies of visits will be under the new coding system.

In addition, as discussed later, there will be simultaneous changes in payment conventions and billing rules for a number of items such as: multiple surgeries, cosurgeons, and bilateral surgery. Application of uniform payment policies presents two problems in projecting volumes. First, billings for these "modified" services have been inconsistently reported in the past. Second, the reduction in payment for surgeries may lead physicians to bill additional amounts for services provided but not now billed or may encourage some physicians to bill for additional services, e.g., to have reciprocal arrangements with other physicians to act as assistant at surgery for one another.

This is the most massive change in Medicare payment for physicians' services since the inception of the program. Not only will there be major redistributions of payments among specialties and geographic areas, but we will simultaneously be revising definitions of service and payment rules. The reduction in some physicians' Medicare income under all these changes could be substantial, as some practices could experience net reductions of 15–20 percent or more. Under these circumstances, the incentives for physicians to change billing practices to mitigate the reductions will be significantly stronger than has been the case in the past.

Overall, physicians could react to the combined effects of these changes in a number of ways that would affect Medicare outlays. They could:

• Bill legitimately under our new definitions of services and associated payment conventions for services for which they do not currently bill.

• Bill for a higher level of service for medical visits.

• Provide more services, particularly visits, concurrent care, consultations and tests.

• Clearly, in light of all these changes, and possible volume responses by physicians and beneficiaries, the budget neutrality calculation is exceedingly difficult and critical. If the conversion factor were set too high, the Supplementary Medical Insurance Trust Fund outlays would be larger than anticipated, increasing the overall Federal budget deficit. In addition, the part B premium would have to be increased sharply to replenish the depleted trust fund (assuming that legislation will be passed to continue the part B premium at 25 percent of program costs).

It will be difficult to separate the legitimate changes (e.g., those due to physician compliance with new uniform service definitions and associated payment rules) from changes due to physician behavior intended solely or primarily to recoup some Medicare revenue losses. In addition, changes in service pricing may produce changes in beneficiary demand for services.

While we expect many changes, with causes not always easy to ascertain, we must do our best to anticipate these changes and account for them in computing the conversion factor. In the first year of the Prospective Payment System for hospitals, the DRG case mix index increased by over 9 percent, and subsequent studies have determined that only a small part of this increase was due to an actual change in case mix. The majority of the increase was attributable to changes in medical records and coding practices.

Some might argue that the MVPS will "take care" of unpredictable changes in frequencies. However, there are several problems with this argument.

• Because the default payment update can only be reduced by up to 2 percent, the MVPS will not adjust for projection errors resulting in over payment in excess of 2 percent.

• Moreover, because the default mechanism limits reductions in future updates, the MVPS has serious shortcomings in the event that projection errors are combined with inappropriate increases in volume. In this case, the impact of the floor on future reductions in the payment update could be substantial.

• Some may also object to the use of MVPS to correct for technical or computational errors. They would argue that the purpose of the MVPS is to encourage the involvement of physicians in the effort to slow the rate of growth in expenditures for physicians services, not make them subject to reductions resulting from correction of governmental errors in making budget-neutral conversion factor calculations.

• Finally, because of the two year lag between expenditures measured under the MVPS and payment updates, there could be permanent losses which could not be recouped under the default MVPS. For example, if, as a result of projection errors, payments were set too high by just 2 percent, permanent losses could exceed $1.6 billion for 1992 and 1993.

Given that computation of an accurate budget neutral conversion factor is critical, we plan to do several things:

(1) Do the best we can to predict frequencies under the standard definitions using the best available data. This will include reviewing the results of special surveys of carrier practices, and analyzing data collected by outside research organizations and PPRC.

(2) Make an adjustment to fees for 1992 to account for changes in the volume and mix of services as a result of the responses of physicians to implementation of the fee schedule.

Previous program experience with reductions in Medicare payments to physicians indicates that physicians change billing practices to partially offset losses resulting from fee reductions. HCFA and CBO have previously assumed that physicians make sufficient changes in their billing practices to offset about half of the savings that would otherwise be achieved by reductions in fees.

We are refining our thinking about applying such adjustments. In the past we have almost exclusively been in the position of predicting the effects of savings proposals, whereas now we need to predict physicians' responses to both increases and decreases in payments for various services. Thus, we believe that it would be appropriate to apply behavioral adjustments to the net change in provider practice Medicare revenue. This information would be

derived through analysis of the BMAD Provider File.

An issue in this regard is the extent to which physicians whose fees have increased will reduce volume in response to higher fees. We might expect them to be more willing to supply services as the Medicare fee increases. Alternatively, some of these physicians might cut back in their practice as Medicare fees increase, providing fewer services.

Another issue is whether physicians will raise their actual charges all the way up to the new Medicare fee schedule. (Medicare payments are the lesser of the actual charge or the fee schedule). We are continuing to study this issue further.

We note that CBO, in modeling the changes in physician fees, illustrates a behavioral response where "winning physicians" slow volume growth. Our own recommendation regarding behavioral effects to be reflected in the April NPRM is still under development. We will be analyzing a variety of alternatives regarding the behavior of winning and losing physicians for purposes of determining possible effects on the conversion factor. For purposes of this model fee schedule, however, *we have not assumed any behavioral offset in the illustrative estimates provided in Addendum A.*

In summary, there are a variety of factors that will affect the accuracy of our projection of the conversion factor for 1992. These include our estimates of the total number of relative value units that will be provided in FY 1991, the accuracy of our projections of the initial distribution of visit codes, legitimate physician response to new national billing rules for multiple surgery, bilateral surgery, assistants at surgery, etc., as well as the accuracy of our projection of the behavioral response of physicians to the price changes in the fee schedule itself. It will be difficult to accurately parse out which of these many possible causes led to any observed error in the initial conversion factor. The Department will carefully monitor changes in physician bills during the transition and will suggest to Congress specific adjustments if specific causes can be identified. However, it may also be necessary to seek general Congressional authority to adjust the conversion factor during the transition if projections prove to be inaccurate and the specific causes cannot be easily identified.

Future Updates of Conversion Factor

Beginning in 1991, section 1848(d)(2) of the Act, as added by OBRA of 1989, requires the Secretary to recommend to Congress by April 15 of each year an update to the fee schedule conversion factor for the following calendar year. In making the recommendation, the Secretary is required to consider the increase in the MEI (a measurement of inflation in the cost of running a private medical practice), the percent increase in aggregate expenditures for physicians' services in the first preceding fiscal year over the second preceding fiscal year compared to the performance standard rate of increase set for the first preceding fiscal year, access to services, changes in volume and intensity of services, and other factors he considers appropriate. (The performance standard rate of increase was described in Chapter I as a central feature of the MVPS.)

Congress may then choose to enact the Secretary's recommendation, enact some other update amount, or not act at all. If Congress does not act, the annual update is set according to a "default" mechanism in the law. Under this mechanism, the update for physicians' services is equal to the MEI adjusted by the amount the actual expenditures for the first fiscal year preceding the recommendations were greater or less than the performance standard rate of increase for that fiscal year. For example, given that the performance standard rate of increase for fiscal year 1990 is 9.1 percent, assume that actual expenditures for fiscal year 1990 increase by 10.1 percent over fiscal year 1989. If Congress did not set the update increase, then the default mechanism would take effect. Specifically, if the MEI for 1992 were 4 percent, the conversion factor update for 1992 would be 3 percent, because actual expenditures for fiscal year 1990 exceeded the performance standard by 1 percentage point. Conversely, if the actual expenditures for fiscal year 1990 increased by 8 percent over fiscal year 1989, the conversion factor update would be 5 percent (4+1) because actual expenditures were 1 percentage point less than the performance standard. The law limits the downward adjustment to 2 percentage points for 1992 or 1993; 2.5 percentage points for 1994 or 1995; and 3 percentage points thereafter. There is no limit on the upward adjustment.

F. Data Options for Fee Schedule Development

Data Source Options

As described earlier, national level claims data will be needed to: (1) Compute RVUs for overhead and malpractice expenses, and (2) compute the conversion factor, with adjustments for 1992–1995 transition rules. Because of the large number of services included in the fee schedule, we do not believe it is operationally feasible to make a separate data request to the carriers for needed data such as was previously done for computing conversion factors for the radiologist fee schedule. Because of the significant level of resources required to collect, process and validate carrier data, we will rely upon data routinely collected by HCFA when feasible rather than request supplemental data from the carriers.

Two possible sources of national data containing procedure level data currently collected by HCFA were considered for completing these fee schedule development tasks: (1) Common working file (CWF) and (2) BMAD procedure, provider, and beneficiary files. Both the CWF and BMAD are routine data systems that provide detailed procedure level data for non-HMO enrolled Medicare beneficiaries potentially useful for both computing national average charges and the conversion factor. BMAD data are submitted annually by the carriers whereas CWF data are reported by carriers through nine CWF host sites on a flow basis. However, because the CWF will not be fully implemented nationwide until 1991, we plan to use BMAD as the primary source of data for computing national average allowed charges.

BMAD data are currently available for 1988, and 1989 data are in the process of being compiled and edited. Each data file used for fee schedule development will be calibrated to the expected total expenditures for physicians' services for 1991, and will be adjusted for consistency with 1991 payment rules and for standardized payment policies (e.g., global fees, visit coding, local codes, coding changes). These files are described below.

BMAD Files

Procedure file: The Procedure file is an aggregate file representing 100 percent of Part B claims. Because it provides frequency of services and allowed charges by specialty and procedure code, we expect to use it to compute relative values for malpractice and other practice costs.

Beneficiary file: The Beneficiary file provides detailed claims data for a 5 percent sample of beneficiaries. Although frequencies for many procedures and localities are too low for computing overhead and malpractice RVUs for low value codes, we expect to use these data to estimate the impact of

standardizing payment policies (e.g., global fees).

Provider file: The Provider file provides detailed claims data for a 5 percent sample of physicians' and suppliers' profiling IDs. The Provider file will be used to compute an adjustment to the conversion factor to account for expected behavioral offsets for physicians that lose aggregate revenues under the fee schedule.

Prevailing Charge (Pricing) File: The Pricing file (1990) is being used in the process of updating the other BMAD files to 1990 (and eventually 1991) payment rules, reflecting changes such as annual updates, overpriced procedure reductions, and the designated specialty provision.

Common Working File (CWF)

The CWF represents a major innovation in the way that Medicare claims are processed. CWF is a decentralized benefit authorization process in which nine host sites review all claims and authorize payment by the carriers and intermediaries. At the point of payment authorization, all claims data are transmitted to HCFA for use in program evaluation and program development. Effective January 1, 1991, CWF will be implemented nationwide. The national implementation will provide very current and detailed claims data that can be used to measure the change in the mix of services resulting from the changes in payment policies and to evaluate the potential impact of physician payment reform, including policy standardization. In the meantime, selective use of available CWF data may help us in some instances to resolve discrepancies identified through the BMAD validation process described below.

BMAD Validation

BMAD data are being validated by comparison with 100 percent claims data from selected carriers. In brief, we are comparing BMAD descriptive data with results from the carrier 100 percent files. We are then computing total allowed charges and RVUs for a sample of procedures to compare estimated conversion factors based on these two data sources. Results from this preliminary validation process will be used to determine whether we will base all calculations on BMAD or whether supplementary data will be obtained directly from the carriers.

One concern with using BMAD data is that, although we are required to compute a conversion factor that will provide budget neutral outlays for 1991, the most current BMAD data we expect to have available for completing this task will likely be for 1989. While we can update these 1989 data to reflect 1991 payment rules, we would not be able to use BMAD to account for any changes in the mix of services provided between 1989 and 1991. This would not significantly affect our estimates of average charges per service, but it could affect the computation of the budget neutral conversion factor.

For example, a conversion factor computed using the 1989 service mix could be too high if services with relatively low relative values (e.g., visits or EKG interpretations) increase more rapidly than services with relatively high relative values (e.g., major surgical procedures) during this time period.

Therefore, CWF claims data for services provided during the fourth calendar quarter of 1990 and the first months of 1991 will be used to measure the changes in the mix of services provided between 1989 and 1991. If analyses of recent data indicate that there is likely to be a significant service mix change between 1989 and 1991, we will make adjustments to the 1989 BMAD as appropriate.

We plan to evaluate CWF data further during the BMAD validation process. We will use CWF data provided during 1990 for selected carriers to evaluate service mix changes and will continue this evaluation on a national basis as CWF data are received in 1991.

Chapter III.—Definitions Necessary for Fee Schedule Implementation

A. Defining a Unit of Service

1. Background on CPT–4 Coding System and HCPCS

Section 1848(c)(4) of the Act (added by section 6102(a) of OBRA of 1989) requires that the Secretary establish a uniform procedure coding system for the coding of all physician services, including an appropriate coding structure for visits and consultations. That section also provides that the Secretary may incorporate the use of time in the coding for visits and consultations only for services furnished on or after January 1, 1993. As part of the process of establishing a uniform coding system, the Secretary is required to consult with the PPRC and "other organizations representing physicians".

Section 6201(e)(4) of OBRA of 1989 requires that the Secretary conduct a study of the desirability of including time as a factor in establishing visit codes and report to Congress by not later than July 1, 1991. The report must include the desirability of modifying the number of visits codes, whether use of time would result in greater uniformity than modification of clinical descriptors and the ability to audit physician time accurately.

Since 1983, HCFA has required that physicians and carriers use the HCPCS to code and bill for physicians' services. The HCPCS has three levels:

Level 1—The American Medical Association's (AMA) *Physician's Current Procedural Terminology Edition 4* (CPT–4);

Level 2—The alpha-numeric HCPCS codes [3]; and

Level 3—Carrier-unique local codes.

HCFA has an agreement with the AMA to use CPT–4 for coding of physician services. Under that agreement, HCFA is represented by one voting member on the CPT Editorial Panel, the organization that is responsible for establishing the codes and their definitions. Although HCFA uses CPT–4 for coding purposes, HCFA establishes the Medicare payment rules with respect to these codes. Services that are not specifically coded in CPT–4 (e.g. chiropractor services) are coded in the alpha-numeric codes of level 2 HCPCS that is established and maintained by HCFA. Services which are not included in either level 1 or level 2 of HCPCS may be coded by carriers using carrier-unique local codes.

Similarly, there are three levels of modifiers for codes. CPT–4 has modifiers as part of that coding system. HCFA also has additional national HCPCS modifiers that are used for payment, billing and medical review purposes. Lastly, carriers are permitted to use carrier-unique modifiers for payment and administrative purposes.

There are several major issues pertaining to the use of these codes to generate payment for physician services under the Medicare fee schedule. Three of these issues pertain to defining a unit of service and are discussed in this chapter:

- How to define visits so that visit codes are used reliably and consistently by all physicians and all carriers;
- The scope of the global surgical fee: what services are to be included in the global surgical fee for a specific procedural code, since the services to be included will determine the RVUs to be associated with the code; and
- When and to what extent to permit use of local codes in a national payment system.

A fourth major issue of when and to what extent to permit payment differentials based on the presence of modifiers to coding for physician

[3] HCPCS codes are used primarily for nonphysician services such as durable medical equipment.

services is discussed in chapter IV on payment adjustments:

2. Coding of Medical Visit Services

The various OBRA of 1989 provisions described above relating to coding of physician visits reflect a widespread concern that the current visit coding structure in CPT–4 is open to varying interpretation as it is used by physicians and carriers and that this variation must be reduced in order to make payment for visits under the fee schedule rational and equitable. Results of a review of 1987 BMAD data by HCFA staff and by the Office of the Inspector General support the view that there is significant variation in the use of CPT–4 codes for physician visits. For example, one carrier showed 86 percent of its total billings for office visits for established patients under code 90060 while another carrier showed only 9 percent of its billings for this same code. Code 90060 is for an "intermediate" level of service. It is third from the top in an array of 6 levels of visits of increasing complexity.

The most common explanation offered for this difference is that the current CPT–4 definitions for these services are not clearly differentiated from one another. A number of approaches to providing more clearly differentiated service definitions are under consideration, including reducing the number of visit codes and the possible incorporation of service time as a factor in defining codes. We expect final resolution of these issues to involve extensive coordination and collaboration by the Department with a number of organizations, including the PPRC, the CPT–4 editorial panel, and organizations representing physicians. PPRC and the AMA are conducting their own study of visit coding issues. They plan to propose changes in visit coding that could be incorporated in the 1992 CPT–4.

We fully expect that cooperation with the AMA CPT–4 editorial panel in this process will result in development of visit codes that will be acceptable for use in the fee schedule. However, if no consensus is developed, we could establish non-CPT–4 HCPCS codes for visits based on the requirement for the Secretary to establish a uniform coding system for all services.

At this time, we are presenting in this model fee schedule a summary of the issues to be addressed and our preferred approaches based on our analysis of the issues to date. As we continue to consult and to prepare the congressionally mandated report on visit coding, the views presented here will be reexamined and refined.

Current Use of CPT Visit Codes

Under the current system, Medicare spends about 410 billion or about 35 percent of total physician dollars on medical visits and consultations. This figure is likely to increase as the fee schedule is phased in, since the Harvard study results have shown cognitive services generally to have been undervalued under the customary, prevailing, and reasonable charge payment methodology. BMAD data also show that about 13 percent of physician dollars pay for office visits, while another 10 percent are for hospital visits. Smaller sums are spent for specialized visits (5 percent of physician dollars), consultations (4 percent), and nursing home and home patient visits (1 percent).

CPT–4 currently distinguishes among visit services for six sites of service: office, home, inpatient hospital, emergency department, skilled nursing facility, and other nursing and domiciliary care facility. CPT–4 also differentiates new vs. established patients for several sites; in the other sites, a distinction is made between initial and subsequent visits. Depending on the site of service and new/established or initial/subsequent categories, CPT–4 contains three to six levels of service for visits. In addition, CPT–4 contains specialized visit codes for several categories of services, including psychiatric, dialysis, ophthalmologic, and critical care visits. Visits are defined separately from consultations.

A number of features of the CPT–4 visit codes and their use have been cited as causes of the wide variation in the way these codes are used in practice. Separation of the detailed descriptions from the listing of visit codes in the published CPT–4 book is believed to discourage some physicians from reading them at all. In addition, many believe that current narrative descriptions of the codes do not clearly delineate differences among levels of service. Further, because the terminolgy for levels of service (e.g., limited or intermediate) is not neutral, it may encourage physicians to upcode based on their perceptions of relative payment amounts.

Another difficulty with the use of the current CPT–4 visit codes is that when the transition to CPT–4 required carriers to map their prior coding system to the new codes, some carriers had fewer levels of service than CPT–4 (e.g., 3 levels vs. 5 or 6) and therefore crosswalked according to other criteria (e.g., payment levels). In addition, there has not been any comprehensive effort by HCFA to require carriers to tell physicians how to use the different levels of codes properly. Physicians often use only three or fewer levels of service to report their visits (although no three levels are used consistently); some use "superbills" that do not even list the full range of levels of service. Thus, while a 5 or 6 level coding structure for a given visit service may be in place in CPT–4, in practice not all the levels may be in use and the levels are subject to varying interpretation.

Basic Changes to Improve Uniform Coding

We believe that at a minimum several basic changes would improve the coding system for visits. We plan to work with the carriers and the CPT–4 Editorial Panel to make these changes by the time the physician payment fee schedule begins to take effect in January 1992. None would require a legislative change. These improvements include:

- Improving the content of service descriptors, i.e., the narrative terminology associated with each code;
- Including speciality-specific examples for each level of service;
- Developing explicit documentation requirements for the physician's medical record to support the choice of visit code;
- Integrating in a single place in CPT the detailed content descriptors with the code for each level of service;
- Replacing the adjectives that accompany each level of service (e.g., "limited" or "intermediate") with a more neutral set of labels such as Level I, II, etc.;
- Improving carrier administration and enforcement of coding rules, including education of physicians on how to use codes appropriately for billing and reporting purposes.

Major Visit Coding Policy Issues

While implementation of the relatively straightforward changes listed above will improve the uniformity of visit coding, many believe that additional changes will be required. Two issues dominate these discussions: (1) whether to incorporate time in the visit code definitions and how, and (2) how many levels of service should be used. Incorporation of time is the more controversial of the two and contains a number of important subissues that will be explored below.

- *Should time be incorporated in the code definitions?* Incorporation of time is a major change in the coding system. No one knows with any precision or certainty how practicing physicians

would react to and use a visit coding system that incorporated time.

There are four principal arguments in favor of using time as a factor.

1. Some believe that it would improve the consistency of the use of codes because time makes differences between levels more clear.

2. Use of time would increase our ability to estimate the frequency distribution of visits under a new coding system, which is important for computing a budget neutral conversion factor and for documenting upcoding if the distribution of visits changes. However, at this point we have data only for office visit duration (from the National Ambulatory Medical Care Survey or NAMCS). A possible source of hospital visit time data is a PPRC survey though it is limited to three specialists. We have not yet identified a source of time data for other sites.

3. If 45 and 60 minutes represented the highest levels in a 5 level system, some believe that physicians would be more reluctant to code higher levels than under the present system, where times are not specified.

4. Use of time would provide a better basis for identifying physicians with aberrant practice patterns and a better basis for auditing physician bills against medical records. (This argument is stronger if actual time is used rather than typical time, another subissue discussed below.)

There have not been any other proposals for revising content of general medical visits that distinguish between levels of service as clearly as those that use time. However, emergency physicians have recently submitted a proposal for emergency department visits that merits consideration.

Possible drawbacks to the use of time as a factor in visit coding include:

1. It is possible that, no matter how time was characterized officially in the published guidelines, it could quickly become for all practical purposes the single factor used to distinguish among medical visits. This could lead to either of two unfortunate scenarios. First, if typical time were used to distinguish among levels of visit service without sufficient emphasis on service content as the primary factor, some observers fear widespread upcoding. Specifically, physicians could use higher codes than were actually appropriate on the grounds that they were more efficient than the average physician (e.g., a visit that takes a particular physician 15 minutes might be *reported* as a 30-minute visit because he mistakenly believed, that it typically took his colleagues longer to perform the same service). Second, if actual time were used to distinguish among levels of visit service, this system could reward some physicians who simply took longer than necessary to perform a service either because they were inefficient or because they had slack time in their practices or both.

2. No research has been conducted to demonstrate that use of time as a part of code definitions would improve consistency in the use of codes. Nor has there been large-scale experience with the use of time-based visit codes either in other public programs or in the private sector from which to draw conclusions.

3. Some fear that use of typical time could make use of codes even less consistent than under the present system, since each physician would make individual and subjective judgments as to what was the typical time for a particular service.

4. The opportunity to use time-based visit reporting for audit purposes (comparing bills against records) may be severely limited by the scarcity of resources for this purpose.

5. Visit frequency distributions predicted using NAMCS data may be inaccurate because we do not know how differently physicians may code services when payment depends on coding decisions. (NAMCS was a survey for research, not payment purposes.)

• *Should time be secondary, equal, or dominant in relation to content of services as a factor in visit coding?* One of the major issues in the use of time is its relationship to content descriptors. As mentioned earlier, many believe that if time were to be introduced, it would be very difficult to keep its status equal to (or subordinate to) content. Thus, time in practice could become the primary criterion for coding visits, even if it were nominally a secondary criterion intended to supplement content descriptors. The likelihood of time actually being used as a coequal or secondary criterion would be improved if explicit decision rules were developed and examples provided to illustrate how coding decisions should be made when time and content seem to lead to different coding outcomes. Examples of such cases follow.

Case 1. A complete physical exam with several tests takes only 15 minutes. Using time as the basis for coding, this might be a level II visit, but using content criteria might change the designation to a level IV visit.

Case 2. Two sutures are removed during a 60 minute visit. Using time this might be defined as a level V visit, but based on content it might be a level II visit.

• *Should time be applied only to office visits or to all visits?* There are two serious difficulties involved in extending the introduction of time in visit coding beyond office visits to visits in other settings. the first relates to the availability of data. Without data on the average visit time outside the office setting (as NAMCS provides for office visits), the crosswalk from the old to new systems would have to rely on the current mean distribution for these visits to estimate the frequency distributions for the new codes. This estimating process could be extremely inaccurate and could compromise the accuracy of the budget neutral conversion factor.

The second problem with respect to time and hospital visit coding is that patient encounter time may be a poor proxy for physician work in the hospital setting because a large component of a hospital visit is time spent reviewing charts, talking to nurses, scheduling procedures, etc. No more appropriate measure of time in the hospital setting has yet been developed.

• *For office visits, should encounter time or total time be used?* The Harvard research team has indicated that it can provide physician work RVUs for visit services based either on patient encounter time or total time (presumably including time for review of chart, consultation with other staff, post-encounter completion of chart, ordering of procedures, etc.). However, we have no data to guide us in estimating likely frequency of services using total time-based visit codes for purposes of computing the conversion factor. In addition, we expect that physicians would find it difficult to estimate total time. Patient encounter time can be more accurately measured and is more meaningful to the patient than any other measure of time. The NAMCS data described earlier could be used for predicting frequencies of code use based on encounter time. In addition, the Harvard work has shown that patient encounter time is a good proxy for physician work with respect to office visits. Phase III of the Harvard study will create a crosswalk between current and proposed codes.

Another logical possibility is scheduled time, but scheduled time in practice may be irrelevant to the amount of time actually spent for a visit and the amount of work the physician puts into the visit. (A standard 15-minute appointment may relate to a task that can be completed in 5 minutes or a problem that may take 45 minutes to resolve.)

• *Should typical (or average) time be used or actual time?* Using actual time

would provide a more precise and specific definition of the level of service in that it would avoid ambiguities about what "typical" and "average" times could mean. Using actual time would provide good historical trend data on which profies could be built for future analysis. However, use of actual time would also mean that a single minute could make the difference between payment amounts and would encourage coding to the higher code for bordering visits. Actual time would imply that we expect physicians to keep records of exact durations of visits when, in fact, many physicians will probably estimate time in any event. In some instances it could be difficult for physicians and patients to establish when the visit started and stopped and what activities should be included in computing the actual length of the visit. Actual time could also result in different payment for the same services depending upon the individual physician's efficiency in providing the service (a problem already noted with respect to use of time in visit coding generally, which is most pronounced when actual rather than average time is used).

Typical time (the typical or average time that physicians generally take for that type of visit) seems more compatible with how physicians are likely to keep records on duration of visits (e.g., estimated times or times based on a schedule book). Typical times would be more consistent with available data for estimation of frequency distributions for office visits for conversion factor computation. (For example, NAMCS data, which attempt to measure actual face to face time, cluster around 5 minute intervals.) Use of typical times would potentially afford some latitude in accommodating variation in physician practice patterns regarding the use of nonphysician practitioners to provide care (e.g., the nurse who checks vital signs during a physician visit for blood pressure management.)

The second major visit coding policy issue related to the number of levels of service and how those levels would be defined if time were used as a factor.

• *How many levels of service should be used?* OIG, in its report to Congress on variation in visiting coding, recommended reducing the number of codes as a way of minimizing the variation in coding for visits. In our October 1989 report to Congress ("Implementation of a Medicare Fee Schedule"), HCFA and the Department also indicated general support for this approach. Most of the discussion of how many levels of service to establish has centered on a 3 level system versus a 5 level system, although a 4 level approach could also be considered. The number of levels presently in CPT–4 ranges from 3 levels for initial hospital and SNF visits to 6 levels for office visits for established patients and all emergency room visits.

Analysis of BMAD data shows that most physicians use only 3 codes (although there is no consistency in which 3), and therefore physician coding might arguably be contained in *3 levels of visits.* The middle code could be established as the routine visit (e.g., covering 75 percent of all visits). Supporters of this approach believe that fewer levels of service would lead to more consistency in coding and less opportunity for upcoding, since physicians would have a narrow range of alternatives from which to choose when reporting their services. Three levels of visits would likely result in significant increases in the payment amounts from one code to the next higher code; where upcoding occurred, it would be very expensive to the program. The middle (or routine) code would likely result in payments too high for some services and too low for others because of the large variation in services potentially provided within each code. These variations, however, might average out because physicians presumably see a wide range of patients. Outlier cases could be handled "by report" (on a case-by-case basis, outside the three established categories).

A *5 level code system* would provide additional levels to account for services by specialties that typically have a higher percentage of more complex and lengthy visits (e.g., geriatricians, rheumatologists, neurologists). Payment amounts would escalate more gradually from level to level; where upcoding occurred, the payment impact would be less severe than under a 3 code system. A 5 level system would also provide for a separate code that could be used for the least intense services that are increasingly done in physician's offices by nonphysician practitioners; under a 3 level system, much more could be paid for this kind of service.

• *What time intervals should be used with the different levels of service?* The following were taken into account as we considered this issue:

—Data from the 1985 NAMCS survey for office visits indicate that time estimates generally cluster around 5-minute intervals, leading us to select timeframes consistent with these periods.

—About two thirds of the office visits would be included in the lowest codes under any of the options we considered.

—About 20 percent of the office visits took about 10 minutes; we assume that physicians would likely code these in the second level of a 5 code system, rather than coding them as the lowest category of visit.

—The percentage distribution of visits for the HCFA 5 code typical time system (less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes) is virtually identical to our estimation of the effect of the PPRC's proposed typical times.

Legislative Issues Surrounding Visit Coding

There are two significant issues relating to visit coding that will require statutory amendment. The Administration intends to submit to Congress legislative proposals as described below. These issues are as follows:

• *Should time be used in visit coding prior to 1993?* If there is agreement on incorporation of time into the definition of levels of service for visit coding, we may want to request a legislative amendment in order to implement the change simultaneous with the implementation of the Medicare fee schedule in 1992. This would avoid the need for a major change in the fee schedule in the middle of the transition period. (Office visits represent about 13 percent of charges for physician services.)

• *How should we correct for errors in projecting the distribution of visits in computing the initial conversion factor?* Since we will have no actual history of volume or frequency distribution of physician services under the new visit codes, our estimated frequency distribution may be inaccurate. Any inaccuracy will cause the budget neutral conversion factor to be too high or too low, resulting in either overpayment or underpayment relative to the amount we would otherwise have paid for physician services. For example, a 5 percent error applied to a base of $10 billion for visits could result in an error of $500 million.

As described in Chapter II, we are prohibited from making any adjustments to relative values in the fee schedule which in one year would result in a net change of more than $20 million in part B expenditures for physician services. Thus, we would need new statutory authority to recalculate the conversion factor following implementation of the new visit codes if it became apparent

that the actual frequency distributions under the new visit codes differed significantly from the estimates we used for calculating the conversion factor.

As discussed earlier in Chapter II, the MVPS is designed to control the growth in expenditures for physician services by adjusting the annual update of the conversion factor. However, use of the MVPS update process to make adjustments resulting from miscalculation of visit code frequencies would not be a preferred approach, since we believe the primary focus of the MVPS should be on controlling volume, not as a tool for making technical adjustments.

Preferred Approach

• *Incorporate time for office visits.* The content descriptors of the new coding system should incorporate, at a minimum, the nature and complexity of the patient's problems and the sepcific services provided. On the surface, incorporation of time into coding of office visits would be likely to enhance the reliability and consistency of visit codes. For example, time could be used in the code development process to establish consistency among the patient's problem definition, services provided, and coding examples. Harvard has demonstrated that time has a high correlation with physician work during an office visit and it is a relatively straightforward concept to incorporate into visit coding for these services. However, any recommendation to include time in office visits should depend upon the results of a pilot test establishing that the accuracy and reliability of coding is improved. We are currently developing our plans to conduct such a test which would be initiated if time is adopted by the CPT–4 editorial panel later this year. Moreover, we do not believe that data currently exist to support extension of time to hospital and other nonoffice physician visits. Thus, we would support use of time as a factor in coding only of physician office visits at this time assuming a pilot test indicates this is appropriate.

At this time, we are uncertain whether the incorporation of time is appropriate for coding hospital visit and other visits made outside of an office setting. Hospital visits in particular differ from office visits because the content and focus of the physician's effort are different. Therefore we are uncertain whether the levels of service and times that are appropriate for office visits would also be appropriate for other visits. Moreover, unlike office encounter time, we have no data with which to predict the frequency distributions of codes for non-office visits that incorporate time. We are, however, continuing to investigate sources of time data for these other visits and we are working on improvement in the coding for them. If time is to be included for office visits, we would anticipate using it as follows:

• *Use time to supplement content descriptors.* Visits should be coded on the basis of services performed (i.e., content), with the inclusion of time as a descriptive factor to provide benchmark standards. Time should be viewed as a supplement, secondary to content descriptors. We believe that basing coding on time alone would be inequitable to efficient physicians. Decision rules and examples should be provided to clarify how time is to be used in coding to minimize the possibility that in practice it will become the primary or sole criterion in establishing level of service.

• *Use encounter time rather than total physician time.* We prefer that encounter time (face to face physician-patient time) be used as a factor in the level of service of physician office visits. It presents fewer operational problems than other measures of time and we have some existing data on which to base frequency estimates.

• *Use typical time rather than total physician time.* We favor use of typical time rather than the actual time of each visit as the measure of time for visit coding. Although actual time could enhance the precision of level of service coding, it could also impose an unreasonable recordkeeping and reporting burden on physicians. In addition, typical time is more consistent with our view that time should serve as an additional descriptor supplementary and secondary to other content descriptors. Moreover, the development of specialty examples for each level of care will assist physicians in determining the typical time for the services described by the code.

• *Establish 5 levels of service with typical times of less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes.* We support establishment of a 5 level of service system for coding of visits. Having 5 levels of service for visit codes leaves enough room for appropriate coding of services in specialties that have very long visits. It will also provide a smaller margin of increase from one level to the next level so that upcoding to the next level, when it occurs, will not result in large payment increases.

We believe that the following typical times could appropriately be used as factors in defining medical visits in a 5 level system: less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes. According to our analysis of NAMCS data, these typical times will result in a distribution that clusters most of the visits in the 3 lower codes, but provides for differential payments for the extremely long visits provided by some specialties.

• *Seek a legislative change to allow use of time before 1993.* We believe that it may be appropriate to request a statutory amendment to eliminate the prohibition on the use of time in visit coding before January 1, 1993. The CPT 4 Editorial Panel has been presented with the results of the PPRC/AMA process and will soon make a decision on the issue of time in coding of visits for inclusion in the 1992 CPT–4 book. If the CPT–4 Editorial Panel decides to incorporate time into some or all visit code definitions beginning January 1, 1992, we would like to be able to implement those codes on that date, simultaneously with the start of payment under the fee schedule. In this case, we would need a statutory amendment to eliminate the prohibition on using time in visit code definitions before January 1, 1993.

• *Seek legislative authority to rebase the conversion factor.* We plan to request legislative authority to recalculate the budget neutral conversion factor if the first full year's experience with the new visit codes reveals that the frequency of visits is significantly different (either up or down) from our original estimates used to calculate the conversion factor. This would be authority only for a one-time "rebasing" or technical adjustment related to visit coding reform—other adjustments would be made under the existing OBRA of 1989 authority.

Other Coding Issues

There are several other visit coding subissues that also need to be addressed, and for which we have not yet developed recommendations. The most important of these are summarized below.

• *Should there be new and established patient distinctions?* The additional "work" required for a new patient needs further analysis. It is not clear to what extent the services provided within a code level differ significantly between a new and an established patient. The NAMCS data on office visits show that visits by new patients take longer (approximately 5 minutes) than visits by established patients. The Harvard Phase I results suggested that the physician work per

time period is greater for new patients than for established patients.

• *Should there be separate codes by site of service?* After we have received the Harvard data and have analyzed differences in work site of service, we will determine to what extent payments should vary by visit site (e.g., office and hospital visits may require different code definitions, and overhead costs are likely to be different). Payment differentials for site of service could be maintained even without different codes for sites of service because a site of service indicator is coded on each claim. Reliance on the site of service indicators on the claim could result in an increase in the number of sites of service recognized for payment purposes. Currently there are only 6 sites of service in visit codes, but there are 10 site of service codes on the claims form. One argument against reliance on these site of service indicators is that it may be difficult to develop uniform visit code definitions that would apply in all sites (e.g., office visits versus hospital visits).

On the other hand, relying on site of service indicators on the claim may result in improvement in the site of service data so that it would be more useful for statistical and program analysis.

• *How should the "other" visit codes be handled (psychiatry, emergency room, ophthalmological, case management, critical care, etc.)?* The categories listed above have long had separate codes and a case can be made that visits in these categories differ from typical physician visits. Indeed, the specialties most commonly performing these "other" visits have generally argued in favor of additional specialized visit codes. However, section 1848(c)(5) of the Act prohibits any differential payment based on physician specialty. Harvard's Phase II study is expected to provide work RVUs for many of these services; these results may be helpful in evaluating the need for specialized visit codes under the fee schedule. In principle, we expect to recognize specialized visit codes under the fee schedule only if a unique service can be identified—a service whose content varies significantly from that of physician visits in general.

• *Should special patient characteristics be used?* The PPRC/AMA consensus panel is considering whether the presence of special patient characteristics such as communication barriers, cognitive impairments and/or chronic physical impairments should be recognized by an increase in the visit code level.

We are not aware of evidence that there is increased physician work in visits made by individuals with these characteristics or that these visits take physicians longer than would be spent with individuals without these characteristics. Moreover, the visit definitions are intended to represent the typical visit (i.e., an average of a range from shorter to longer visits). Thus, we would question the need for an automatic increase of one level even if there were evidence that patients with these special characteristics required more time or effort to provide the content included in a defined level of service.

In general, the Medicare physician fee schedule payments are being established based on averages. Thus, we expect some variation among patients but these differences should usually average out across physicians' caseloads. Thus, while we are not recommending that special patient characteristics be recognized for visit coding, a payment modifier for unusual circumstances which is discussed in Chapter IV might provide a mechanism for dealing with very unusual circumstances.

In addition, an automatic increase of one level for patients who have these special characteristics presents several other problems. The special characteristics are difficult to define without creating the opportunity for gaming to increase payment inappropriately unless they are defined by the results of formal evaluations. However, use of formal evaluations or assessments merely to justify a higher visit code level imposes a documentation burden on the physician and a potentially significant and unnecessary cost to the beneficiary.

• *Should nonphysician practitioners use the same codes as physicians when they provide services without any physician-patient encounter?* Visits made to allied health professionals (e.g., nurse practitioners, social workers, physician assistants, etc.) who are employed by a physician may be covered by Medicare as "incident to" the physician's service if the physician is on the premises when the service is provided, even when the beneficiary does not see the physician (see section 2050 of the *Medicare Part B Carriers Manual*). The law provides for inclusion of these services in the Medicare fee schedule. Also, there is a CPT–4 office visit code that specifically indicates that the physician need not provide the services.

These services have historically been billed using CPT–4 visit codes used by physicians. Using current BMAD data, it is not possible to identify those "physician" visits that were really visits to these allied health professionals employed by physicians.

However, we believe that the number of these visits is very limited and the current CTP–4 definition of visits only expressly recognizes these visits in the lowest level of service.

Although the times used in the definitions of visits will be physician-patient encounter time, the content of the visit is not limited to services that can only be performed by a physician. We expect that nonphysician practitioners who provide services "incident to" a physicians' service would continue to use these codes. Issues related to establishing payment amounts for nonphysician practitioners are addressed in Chapter IV.

• *Are separate codes for consultations necessary?* In the current CPT–4 definitions for consultations it is difficult to clearly distinguish between initial office visits and initial consultations since each involves evaluation of the patient and each may or may not invoke the initiation of treatment. Moreover, the content of a visit versus a consultation is identical in many cases.

The difference between consultations and visits appears to be whether the patient was referred by another physician and whether the physician has assumed responsibility for the continuing care of the patient. If the patient was referred by another physician and the consultant has not assumed responsibility for the continuing care of the patient, the encounter may be billed as a consultation regardless of whether treatment was provided at the request of the attending physician.

Since the content of a consultation is so finely distinguished from the content of a visit, the question is whether consultations should continue to be coded and valued separately from visits. Relatively complex consultations might receive higher payments without establishing separate code levels if any extra work for the consultation justified coding to a higher code level. We expect to analyze the relative values for physician work that will be provided by phase II of the Harvard study for visits and consultations before we recommend whether initial consultations should be coded and/or valued as initial visits.

3. Scope of the Global Surgical Package

Background and Current Carrier Procedures. As mentioned earlier, under the Medicare fee schedules based on the Harvard RBRVS study, national uniform relative values would be established for all physician services. A national

conversion factor would then be calculated. The GPCIs or GAF would then be incorporated to produce local Medicare fee schedules.

Since the fee schedule is based on national relative values, uniform definitions of services are required. Without such standardization, it would not be possible to compute budget neutral conversion factors with any degree of accuracy. Standardization is also necessary to produce equitable payment amounts. Standardization of surgical procedures is a special problem because of the concept of a global package for surgery. Surgical services make up about one-third of all billings for physicians' services and are expected to be about $9 billion in fiscal year 1990.

The surgery billing guidelines in the AMA's CPT-4 state that "Listed surgical procedures include the operation per se, local infiltration, metacarpal/digital block or topical anesthesia when used, and the normal, uncomplicated follow-up care." This concept is referred to as a "global package" for surgical procedures. Under this concept, surgeons bill a single fee for all their services usually associated with the surgery. This global fee includes all intra-operative services necessary for the surgery itself, and follow-up care such as hospital and office visits and services such as removal of sutures and casts. In some cases, preoperative visits may also be included.

Each of the Medicare carriers uses the concept of global fees for surgery. However, there are significant variations among carriers as to what periods constitute preoperative and post-operative care and what specific services are included in these periods. For example, in a recent carrier survey done by HCFA, 53 percent of carriers included preoperative care in the global surgical fee. The range of days in this preoperative period was from 2 to 5 days prior to surgery. While 100 percent of carriers include post-operative care in most global surgical fees, the number of days in post-operative care varies by procedure. The number of days included in post-operative care ranged from 0 to 270 days after surgery. Studies done by other groups such as the PPRC and the Center for Health Economics and Research (CHER) similarly demonstrate the lack of a national uniform global surgery policy among Medicare carriers.

Harvard Study Assumptions

As discussed in chapter I, the physician work RVUs in the fee schedule will be primarily based on phase II of the Harvard study. The surgical global services definition in the Harvard study is narrower than most carriers' definition today.

The surgical global services in the Harvard study included the hospital admission work-up and hospital visits before the operation; the primary operation; immediate post-operative care including dictating operative notes, talking with the family and other physicians, writing orders, and the evaluation of the patient in the recovery room; post-operative follow-up on the day of surgery, and post-operative hospital visits. The surgeon's initial evaluation or consultation, and pre- and post-operative office visits were excluded.

The global service for surgery in an ambulatory setting included the preoperative work-up; dressing, scrubbing, and waiting before the operation; the primary operation; and post-operative care on the day of surgery. Again, the surgeon's initial evaluation and consultation, and pre- and post-operative office visits were excluded.

The work RVUs for surgical services expected from Harvard will, therefore, often be narrower than the traditional concept of a glogal surgical package. These work values will have to be adjusted to reflect whatever national uniform global surgical definition is selected. For purposes of calculating the model fee schedule, we have increased the Harvard work values for major surgical procedures by 10 percent. We expect to refine this adjustment in the coming year prior to finalizing the 1992 Medicare fee schedule.

Preferred Definition

Implementation of the fee schedule will have significant redistributional effects among types of services and physician specialties. One set of simulations based on preliminary Harvard values and an overhead-only GPCI show that program payments for surgical services would in the aggregate be about 16 percent less under the fee schedule, while payments for visits and consultations would be 27 percent greater. Although these simulations did not have the final Harvard values and did not weight the components and the GPCI as was subsequently mandated by OBRA of 1989, it is felt that they represent a fair approximation of the directional effects of the fee schedule.

We believe that the lowered payments for surgical services under the RBRVS could provide an incentive for surgeons to "unbundle" heretofore global services and bill separately for some pre- and post-operative services. "Unbundling" is the process whereby physicians fragment a procedure, such as a total hysterectomy, into its component parts, billing separately as if each component were done as a separate surgical procedure. Unbundling can also occur when surgeons bill separately for visits related to the surgical procedure. This can result in charges that are much higher than if the total procedure was correctly described and billed. "Unbundling" is not a new concept, and all third party payors, private insurers as well as Medicare, are concerned about it. The increased value of visits and consultations could add to the incentive to "unbundle." This could provide a means for surgeons to offset payment reductions for surgery expected under the RVS based fee schedule.

For all these reasons—budget neutrality, payment equity, and safeguarding against unbundling—we are proposing the following uniform, national definition of global surgical services. This policy would apply in all settings. Although there is considerable existing variation among carriers and no national existing "norm," we believe that our proposal reflects what exists at many carriers and to a certain extent the way that physicians already bill.

• *Initial Evaluation and/or Consultation by Surgeon.* About 40 percent of carriers currently include in the global fee the initial evaluation or consultation by the surgeon to determine the need for surgery. However, they only do so if the consultation takes place within 3 to 7 days prior to the surgery. If the decision is made not to do the surgery, the surgeon is allowed to bill separately for the consultation in all cases.

We recommend that the initial evaluation/consultation be paid separately. It is a distinct, readily identifiable service that is furnished whether or not the surgery is performed. Furthermore, the value of the work for the evaluation/consultation is the same whether the surgery is performed or not. Since it is always billed when the surgery is not performed (and is probably billed in many cases where it is included in the global package because in the case of elective surgery many consultations probably take place more than 3 to 7 days before the surgery) we feel that it is preferable from both a policy and an operational standpoint to pay for the surgical evaluation/consultation separately.

The underlying concept of the fee schedule is to uniformly base payment on the resources involved in providing a service. Paying the initial evaluation or consultation by the surgeon separately in all cases will do this. A disadvantage

of allowing separate billing of the consultation is that it subjects the program to possible upcoding of the level of consultation billed (e.e., consultations are billed using three levels of codes reflecting varying levels of effort). However, we can protect the program from some financial risk by adjusting the budget-neutral conversion factor calculation by factoring in the additional consultations that are now included in the global fee by some carriers which will be billed by surgeons.

• *Preoperative Visits.* The majority of carriers presently have a global package which includes preoperative hospital and office visits for periods averaging 3 to 5 days. We believe that a global surgical package should reflect the total work required for the surgeon to complete the service once the decision for surgery is made. We are therefore recommending a preoperative policy that does not include a specific number of days, but instead includes all preoperative visits, in or out of the hospital, by the surgeon from the time of the evaluation/consultation where the decision to have the surgery is made.

(We would note that surgeons can always bill separately for services unrelated to the surgery regardless of when they were provided.)

We believe that this is the practice which most surgeons already follow today. A recent study by CHER of the 100 most frequently performed surgical procedures paid by Medicare shows that in the overwhelming majority of cases, physicians follow the global billing concept, i.e., they submit a single bill for all services associated with the surgery. Once the surgical evaluation/consultation is rendered, we do not believe that any additional visits by the surgeon are usually necessary until the surgeon sees the patient until shortly before the surgery in the hospital. Also, by not linking the policy to a specific number of days, e.g., 5, we are not as susceptible to "gaming," e.g., visits on day 6.

One possible objection to this policy is that it would not allow the surgeon to bill for services provided to seriously ill patients that need to be stabilized prior to surgery. However, we believe medical physicians, not surgeons, are responsible for stabilizing patients prior to surgery. For unusual cases where the surgeon is actively involved in treating the patient by providing visits before surgery, we would allow payment when documentation justifying the need for the surgeon's service is submitted. Another possible objection to this policy is that carriers may need a fixed number of preoperative days (e.g., 14 or 21 days) included in the global fee for operational reasons. We will be considering this issue further.

• *Intra-operative Services.* The AMA's CPT–4 contains codes and brief descriptions of all physicians' services. There is a general understanding by physicians and insurers that intra-operative services normally a usual and necessary part of a surgical procedure are included as part of the definition of a global service. We recommend that these intra-operative services be included in the definition of a surgical service. In addition, payment rules will be established to pay for other surgical procedures not included in the global fee. This "multiple surgery" issue is discussed later under standardization of payment modifiers.

We believe that whatever inconsistencies exist concerning what specific services should be included as part of a surgical procedure should be eliminated so that we will have a national uniform global policy. Our carrier medical directors have expressed concern that there is an even greater potential for unbundling of the intra-operative services than for pre- and post-operative services. We plan to work with the physician community, the PPRC, and the carrier medical directors to arrive at a clear understanding for all global surgery packages as to exactly what are the usual and necessary intra-operative services for each surgery.

• *Complications Following Surgery.* We would include services provided during additional trips to the operating room to correct for common complications (e.g., replacing stitches) in our global package. Many of our carriers already have such a policy. We believe that the global payment should cover all of the surgeon's services necessary for successful completion of the surgery in normal circumstances. We believe that this is the way most surgeons currently practice, and that they do not usually bill separately for such services. We do recognize that unforeseen circumstances can occur.

We are considering three methods of implementing this policy:

• One method would be to include all reoperations for complications that occur within a specific time period after the initial surgery. This period could be 24 hours, 72 hours, or the remainder of the inpatient stay. An exceptions process could be established for dealing with reoperations in highly unusual cases.

• Another method would be to compile a list of complications such as re-suturing, which if required, should be done at no extra charge by the surgeon. Additional payment would be allowed outside of the global fee for reoperations in other cases which because of the severity of the illness or other circumstances, could not ordinarily be anticipated or prevented.

• The third method would be to use a combination of a specific time period and lists. That is, a list of complications which should always be included in the global fee, regardless of the time period, would be combined with a time period during which no payment would be made for reoperations *unless* documentation of the highly unusual circumstances justifying additional payment is submitted.

These lists of complications could be general, or could be family or procedure specific. We are asking our medical advisors and the physician community for further guidance on this issue.

• *Post-operative Visits.* All carriers currently include post-operative services in their global package. The number of days varies by carrier and procedure. We recommend a standard 90-day post-operative period which would include all visits by the primary surgeon during this period unless the visit is for a problem unrelated to the diagnosis for which the surgery is performed. Although 90 days is ample for most surgeries, some—such as open heart surgery and certain orthopedic procedures—require a longer period for complete recovery. We propose using the 90-day period in most cases, and plan to seek advice from carrier medical directors and the physician community on the appropriate time frame for the small number of procedures requiring a longer period.

A global policy should be selected that is no less stringent than what exists at most carriers today. Indeed, a case could be made for a more stringent global policy than that existing today because of the added incentive provided for "unbundling" by the fee schedule. In either case, we do not believe the physician community would be disadvantaged in the aggregate by our recommendations because:

• The CHER data show that physicians rarely bill out of the global package now, regardless of the carrier global fee policy.

• In computing the relative values for the national uniform global surgeries, we will be adding the value of the visits presently paid separately by some carriers to the value of the surgery to arrive at a total value for the global surgery.

Carriers would then be instructed to vigorously enforce the new global definition to prevent physician gaming by "unbundling."

PPRC Recommended Definition

The PPRC surveyed all carriers for four of the most commonly performed surgical procedures, and found the same types of variations as did the HCFA survey. The PPRC then convened a consensus panel of physicians from the various surgical specialties and representatives of Medicare carriers. PPRC evaluated the carrier survey and the recommendations of the consensus panel and recommended the following national surgical global policy in its 1989 *Annual Report to Congress:*

- The principal surgeon's evaluation of a patient for a new surgical problem is not included in the global service.
- All preoperative hospital visits provided by the principal surgeon on the day before and the day of surgery are included in the global service.
- All institutional and outpatient visits provided by the principal surgeon during the 90 days following the primary operation are included in the global service unless the visit is for a problem unrelated to the diagnosis for which surgery is performed. Visits related to complications of surgery are included.
- All intra-operative services performed by the principal surgeon that are a usual and necessary part of the primary operation are included in the global service.

PPRC's policy would also apply to operations performed in inpatient and outpatient settings. The main differences between our and the PPRC's definitions are that we would include all visits by the principal surgeon from the time of the surgeon's evaluation or consultation while the PPRC includes only inhospital visits the day before and day of the surgery; for intra-operative services we would include some concurrent operations and re-operations for complications and the PPRC would not; and the PPRC would include all visits for a 90-day post-operative period, while we would use 90 days in all cases except for a few services which require a longer period.

Computing Work RVUs for Global Surgery

Once the definition of global surgical services is established, the Harvard work RVUs will have to be adjusted to reflect the policy definition. Since the Harvard RVUs will primarily represent inhospital services, the value of all other services to be included in the global payment must be incorporated into the Harvard value. This would include not only adding pre- and post-operative visits and consultations, but also developing a uniform national definition of exactly what intra-operative services are normally included in the surgery, and how this compares to what was included in the Harvard RVUs. During Phase III Harvard will perform further research on work for global surgery based on definitions that HCFA will supply.

This means that for each of the surgical global packages, we must determine the frequency and value of each surgery-related service to be included in the package. To do this will involve using a number of sources, probably in conjunction with each other.

- *Claims Data*—This information is readily available but has limitations. It will show the frequency of services billed and the payment amount for these services. However, it only shows services billed, not services that physicians presently provide as part of a global service and for which no bills are received.
- *Research Projects*—Under research sponsored by HCFA, CHER conducted a study of the 100 most frequently performed surgical procedures billed to Medicare. They examined the claims associated with surgeries for a sample of Medicare beneficiaries to see what other services are billed pre- and post-surgery.
- *Expert Panel*—Convene groups of physicians to develop a consensus on what services should be included as part of a global service on a procedure by procedure basis. This would, of course, be a time consuming, laborious process which could not likely be done prior to the April 1991 NPRM. The American College of Surgeons has already done this for a number of general surgery services for the PPRC. We can work directly with the AMA and other physician groups to convene these panels. We are also considering Harvard's proposal to include this as part of their refinement of the RBRVS. Other alternatives include using already existing internal sources such as HCFA, PHS, and carrier physicians.

As mentioned in Chapter II, overhead and malpractice RVUs are based on a percentage of the current average allowed charge. Data on charges will have to be adjusted for consistency with the global fee policy. Payments currently made for visits or other services might need to be packaged into the global surgical fee. This would have an effect on the average allowed charge of both the surgical service and the visits or other services.

Other issues related to global surgery—multiple surgery, bilateral surgery, and less than global surgery—are discussed in the section on payment modifiers in Chapter IV.

4. Minor Surgery and Nonincisional Procedures

Minor Surgery ("Starred" Procedures). In addition to the major global surgeries in the Surgery section of the CPT, there are a number of minor surgeries designated by a "star." These relatively minor surgical services involve a readily identifiable surgical procedure but include variable preoperative and postoperative services (e.g., incision and draining of an abscess) and are not traditionally paid using a global surgical concept. Because of the difference in preoperative and postoperative services, the CPT instructs physicians to bill separately for the procedure itself and any associated services or visits (e.g., hospital or office visit, cast change). However, CPT was established for reporting purposes only whereas HCFA can establish payment rules as to how to code for billing purposes.

Nonincisional Procedures ("Scopies"). In addition to major and minor surgeries, the surgery section of the CPT also includes the "scopies." These are diagnostic and/or therapeutic procedures (e.g., colonoscopy, cystourethroscopy) that are frequently performed by nonsurgeons, and may or may not involve actual surgery (e.g., removal of a polyp). They are done in both hospital and ambulatory settings. CPT does not specify whether visits are to be billed in addition to the "scopy" if a readily identifiable service (e.g., patient evaluation) is performed in addition to the "scopy." CPT billing instructions also state that when the scopy is diagnostic, follow-up care for these "scopies" includes only care related to recovery from the procedure itself. Care of the condition for which the diagnostic procedure was performed or of other concomitant conditions is not included and may be billed separately.

Preferred Approach. Presently, most carriers report that they conform to CPT coding rules with minor variations as to when visits are allowed in addition to the surgery or "scopy" being performed. However, in research on this issue, using 1986 claims data, CHER found that physicians do not often bill for office visits when performing endoscopies. Visit bills were submitted for only 18 percent of proctosigmoidoscopies, 10 percent of sigmoidoscopies, and 2 percent of other common scopies.

Under the RBRVS concept, our payments should reflect the actual work performed. If the sole purpose of an encounter is to have minor surgical procedure or "scopy" performed, there is no justification in paying for both a visit

and the procedure. On the other hand, if evaluative services are performed unrelated to the surgical procedure or "scopy", a visit could be paid.

We believe post-operative visit services related to the procedure (e.g., removal of sutures) should be included in the payment for the procedure. This will guard against excess billings for procedures not previously billed. We are therefore recommending that for "starred" procedures and "scopies" that no visit generally be allowed in addition to the surgical procedure or scopy unless a *documented* separately identifiable service is provided, and that post-operative services related to the procedure be included for a period of 30 days.

PPRC Recommendation

The PPRC recommends excluding "starred" procedures and "scopies" from a definition of global surgical services.

5. New Services and Local Codes

Current Use of Local Codes. As previously discussed, local codes (i.e., HCPCS level 3 codes) have been developed by carriers to determine and make payments for services that have no national code. Use of local codes has afforded carriers the ability to quickly and efficiently handle coverage of and payment for new services, services that are unique to a geographic area, and other services which are not described by national codes already in existence. However, the use of local codes has introduced some variation in payment policies among carriers.

Effort to Reduce Use of Local Codes. Physician payment reform is intended to provide for uniform application of payment policies between geographic areas. To achieve this goal, HCFA is reducing the number of local codes used by carriers. HCFA is currently reviewing local codes with a frequency exceeding 500 and/or allowed charges of more than $50,000. Carriers are reviewing codes which do not meet these criteria.

Whenever both national and local codes exist to describe the same service, a national code will replace each local code. Codes may be deleted if they are obsolete or if a carrier misinterpreted a CPT-4 definition and inappropriately used a local code. Carriers will identify replacement codes for local codes not being reviewed by HCFA.

As of July, HCFA has reviewed 1,160 physician services related local codes representing about $388 million in allowed charges in 1987 BMAD data. Since 1987, 187 of these codes have been deleted, 911 have been replaced with national codes, and 62 have been retained. These 62 retained local codes represent about $20 million in allowed charges in 1987 BMAD. We will recommend that these local codes be included in CPT-4 where appropriate.

Need for Retention of Local Codes for New Services. However, carriers will still need to retain local codes in situations where no national code and thus no RVU exists for a service. Under the current payment system, carriers pay for new services in a variety of ways, such as use of the prevailing charge for the service which most closely resembles the service being billed, or to pay the actual charge for the service until a charge history is developed.

HCFA expects to allow carriers to use local codes and RVUs with periodic review and approval from HCFA. Carriers would continue to develop local codes and RVUs. However, HCFA would periodically approve or disapprove of carrier use of local codes and RVUs or would determine new or replacement national codes and RVUs. This would allow carriers to quickly pay claims, but will provide HCFA with more control over the development of local codes.

8. Defining Geographic Localities

Current System. Under the present CPR system of payment for physicians' services, a Medicare locality is the geographic area which the carrier uses to determine the prevailing charges for services. There are presently 240 Medicare localities, which were developed by carriers, based on their knowledge of local medical practice and economic conditions. Some of the localities reflect political boundaries such as counties or cities, others are zip codes, some are metropolitan areas, and some are as small as parts of cities or as large as States. Many localities are actually noncontiguous areas that are treated as a single locality because the areas share common characteristics. Medicare locality boundaries have remained relatively stable since the inception of the program in 1965.

Localities Under the Fee Schedule. Section 1848(j) of the Act defines fee schedule areas as Medicare payment localities. However, recognizing the lack of consistency among current localities and the fact that significant demographic and economic changes may have occurred since the existing localities were established, Congress required in section 6102(d)(6) of OBRA of 1989 that the PPRC conduct a study to determine the feasibility of using some other configuration, such as States or MSAs, for payment areas under the fee schedule. The report is due July 1, 1991. Once this report is evaluated by the Administration and Congress, decisions will be made whether to retain or reconfigure the existing localities.

Under the current system, carriers are often required to "gap-fill" to compute prevailing charges. This occurs when insufficient charge data exist within a locality for a specific procedure or for a type of service or a certain physician specialty. One type of gap-filling involves combining data from all localities to compute a prevailing charge for a given service. Some carriers (typically those with a large number of localities within their service areas, e.g., Texas) construct a "super-locality,"—a combination of localities. These super-localities may even be assigned locality codes. This will not be necessary under the fee schedule.

As previously discussed in Chapter II of this report, GPCIs have been developed for all existing payment localities. Since a relative value will be computed for every physician service and a GPCI will be available for every locality, a fee schedule amount will be computed for every service for every locality. Even if a service was never previously rendered in a given locality a fee schedule amount will exist if that service is ever billed to the carrier in the future. All payments under the fee schedule will thus be made at the normal locality level, rendering existing "super-localities" obsolete. Thus, we will be reviewing the localities listed in Addendum C to determine which will no longer be necessary under the fee schedule.

Chapter IV Adjustments to Fee Schedule Payments

A. Site of Service Differential

Payments under the Medicare fee schedule are designed to reflect the resource inputs used by a physician to provide a service. Measurements of these resources will be incorporated into relative value units which, as described earlier, will be the basis for determining the Medicare fee. The relative value will be comprised of work, practice and malpractice cost components.

The practice and malpractice components of the relative value should reflect practice and malpractice costs, which may vary by site of service. For instance, some practice and malpractice costs—those directly associated with providing a service—may vary depending upon whether the service is performed in a physician's office or in a facility. Examples of direct practice costs are equipment, supplies and personnel used to perform the service

itself. Office rent, utilities, and billing clerks are examples of indirect costs. Malpractice costs may also vary by site of service as there will be liability costs associated with the functioning of equipment and employees. Physicians using equipment in their offices could have higher malpractice costs than those using equipment owned by a facility.

We are considering providing differential payment based on site of service under the fee schedule. Site of service differential as it applies to physician visits has already been discussed in Chapter III. The discussion that follows therefore is limited to non-visit physician services that can be performed in more than one setting. (Radiology and diagnostic test procedures represent another "special case." Later in this chapter we discuss setting payment amounts for professional and technical components of these services.)

In addition to our desire to vary payment amounts based on differences in resource costs, we are also considering differential payment based on site of service in order to provide incentives for physicians to perform procedures in the most appropriate setting. By providing additional payment for services that can be safely performed in an office, Medicare would encourage provision of the services in offices and would incur lower total costs than if procedures continued to be performed in inpatient and outpatient hospitals and other facilities. Additionally, we are considering a payment limit on office-based procedures (procedures routinely or typically performed in offices) performed in an outpatient hospital department to reflect differences in practice costs and to maintain incentives for providing these services in physicians' offices.

Currently, there are two situations in which Medicare rules either limit or provide additional payment for a physician service depending upon the site where the service is rendered. The two situations are as follows:

- Outpatient Limit

Sections 1842(b)(3) and 1861(v)(1)(K) of the Act, as enacted by the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), authorize the Department of HHS to limit payment for a service routinely performed in a physician's office if the service is provided in an outpatient hospital setting. Implementing regulations at 42 CFR 405.502(f) establish the limit at 60 percent of the prevailing charge. Since a portion of the payment for a physician service includes overhead expenses, the outpatient limit is applied to avoid paying both the physician and hospital for the cost of such overhead expenses as equipment and supplies which are incurred by the hospital. The outpatient limit has been criticized for discounting all overhead expenses from physicians' fees without recognizing that some overhead expenses (e.g. billing and malpractice) are borne by the physician regardless of site of service.

- Payment for Incidentals

Payment for services and supplies that are incidental to a physician's service is currently made separately by some carriers. In this case, additional payment is usually made when a service has moved from the hospital to the physician's office setting. The additional payment is made to compensate the physician for the extra cost of incidentals that would otherwise be borne by the hospital and that are not included in the carrier's physician service allowance.

We would note that additional payment for designated services is provided when a surgical procedure routinely performed in a hospital inpatient setting is provided in an ambulatory surgical center (ASC). An ambulatory surgical center can be a doctor's office or part of a hospital which has been certified to receive Medicare payment for certain inpatient procedures which have been determined to be safe to perform in an ambulatory setting. For those procedures which can be performed in ASCs, Medicare pays both the physician's surgical fee plus a separate facility fee. The additional payment, the ambulatory surgical center fee, is provided to give physicians an incentive to move a service from a hospital inpatient setting to a less expensive outpatient setting.

Options Under A Fee Schedule

As detailed in Chapter II, OBRA of 1989 prescribes a methodology for computing overhead and malpractice RVUs by applying historical practice cost percentages to base allowed charges. Section 1848(c)(3) of the Act as added by OBRA of 1989 also gives the Secretary the authority to develop policies with respect to the use of modifiers and other "ancillary policies" needed to establish a Medicare fee schedule based on relative value units. Based on these legislative authorities, there are several options regarding differential payments based on site-of-service under the fee schedule. Options being considered are described below.

Option 1—Pay the Same Amount for Physicians' Services Regardless of Site of Service

Under this option, payment would not vary by site of service. Payment would be the same regardless of whether the service was performed in an office or non-office setting. There are two general approaches under this option which we are considering.

Option 1(a)—Base Payment on Practice Costs in the Dominant Site of Service

Although payments would not vary by site of service under this option, practice and malpractice costs would be based on the dominant site of service. For services performed predominantly in an office, payment would reflect practice and malpractice costs in the office setting. For services performed predominantly in non-office settings, payment would reflect non-office practice and malpractice costs. There would be no limitation for office-based procedures performed in a facility or additional payment for facility-based procedures performed in an office.

Because payments would reflect practice and malpractice costs in the dominant site of service, payments would be too high or too low when the service was provided in the site that did not predominate. For instance, if the office site were dominant, payment to the physician would be too high when the service was provided in the non-office setting. This would occur because practice and malpractice costs not incurred by the physician would be included in the payment. In this case, there would be inappropriate incentives to perform a service in a non-office setting. Conversely, if a non-office site were dominant, payment to the physician would be too low when a service was performed in an office. This would occur because practice and malpractice costs incurred by the physician in an office would not be included in the payment. In this case, physicians would not have a financial incentive to perform facility-based procedures in their offices.

Option 1(b)—Base Payment on Practice Costs Averaged Across All Sites of Service

Under this option, there would be one practice cost relative value based on the weighted average practice costs across all sites. Similar to option 1(a), payment would not vary by site of service.

Option 1(b) would provide payments that were too high or too low regardless of whether the service was provided in the predominant site of service. Since a physician's practice costs would be less

in the hospital setting, providing compensation based on a weighted average would lead to excessive payment for services provided in hospitals. Conversely, services provided in the office would be underpaid. Thus, this approach would provide incentives to perform services in a hospital that could be more appropriately performed in an office.

Option 2—Vary Payment by Site of Service

Under this option, payment would vary by site of service. Again, there are two general approaches.

Option 2(a)—Base Payment on Office or Non-Office Practice Costs

Under Option 2(a), different practice and malpractice cost relative values would be developed for office and non-office settings. The appropriate practice cost relative value unit would be applied to determine the physician's fee. For instance, if a service were performed in an office, the payment amount would reflect office-specific practice and malpractice cost RVUs. If the service were performed in a facility, payment would reflect the non-office practice and malpractice cost RVUs.

An advantage of this approach would be that payments would reflect incurred practice and malpractice costs regardless of where the service was provided. Under this option, physicians might have incentives to perform facility-based procedures in their offices since, by performing facility-based procedures in their offices, they could receive higher Medicare payments. Although the higher payments would reflect office practice costs, the administrative convenience of performing services in their offices might in some instances provide sufficient incentive to encourage inappropriate movement of hospital services to the office setting. This problem would be alleviated if a list of hospital-based services that could safely be performed in an office setting were developed.

A major difficulty with this approach is that practice cost data by procedure for office and non-office settings do not presently exist and would be expensive and time-consuming to collect and maintain. PPRC is currently exploring estimating practice costs through surveys of physicians' practices and from studies of individual medical practices. However, this work is not expected to yield the comprehensive and detailed data that would be needed for Option 2(a) in time for initial fee schedule implementation.

Option 2(b)—Provide Differential Payments in Limited Circumstances

Another approach would vary payment based on site of service following, to a large extent, the framework in present law. Because it would use existing categories, it would be much more feasible to implement by January 1, 1992 than Option 2(a). Under this option, payment would be as follows:

- Office-based procedures performend in an outpatient setting would be subject to the outpatient limit. We would have to determine the magnitude of the limit under the fee schedule.
- The ASC payment would be continued. That is, we would continue to pay for the physician's service and a separate ASC facility fee.
- For certain facility-based procedures that we have determined to be safe to perform in a physician's office, an additional payment would be made as part of the physician's fee for the cost of equipment, supplies, and other direct expenses incurred in the physician's office.

This policy retains both the ASC payment and the outpatient limit, making it similar in those respects to current policy. However, under this policy, we would not allow separate billing or payment for incidentals as some carriers do currently. Another distinction between this option and current policy is that we would provide additional payment for certain facility-based procedures which had been determined to be safe to perform in a physician's office.

Since this option provides for differential payments based on site of service in specified circumstances, physicans in those circumstances would be given incentives to perform procedures in settings where costs were lower. Also, when payments differed based on site of service, payment amounts would reflect differences in practice costs. Both these goals, however, would not be achieved or would not be achieved fully if we did not provide the appropriate limitation or additional payment. If additional payment for services that are safe to perform in the office were too low, physicians might continue providing these services in hospital or other facilities. If payment were too high for an office-based procedure peformed in another site, physicians would have less incentive to perform the service in their offices.

B. Professional/Technical Component

"Professional" and "technical" modifiers have been established for some part B physician services in order to acknowledge in the payment system that physicians should be compensated differently depending on what portion of the service they actually provided. The professional component is presumed to include the physician's work in interpreting the test result in the case of diagnostic services and in managing the administration of therapy in the case of therapeutic radiology services. The technical component encompasses the cost of the equipment, the salary of a technician, films, etc. A "global" charge refers to when both the professional and technical components are provided.

In some cases, the professional/technical component modifiers serve much the same purpose as a site of service differential, since whether a physician, such as a radiologist, incurs the costs of employing technicians and purchasing equipment used to furnish a service will often depend on whether the service being provided in the physician's office or in a hospital or other facility. However, if a physician furnishes a service to a hospital inpatient or outpatient, the physician is permitted to bill only for the professional component.[4] Moreover, even radiologists furnishing services in their offices may need to bill only for a professional component payment if, for example, the only service rendered was interpretation of an x-ray while the actual test was conducted elsewhere. Thus, the professiona/technical component distinction hinges on the site of service, the status of the patient and the nature of the service actually provided.

Under the current payment system there are three types of physicians' services that use the professional/technical component distinction. One group is diagnostic and therapeutic radiology services, first discussed in chapter II. A second group is certain diagnostic tests which involve a physician's interpretation. These include, for example, the electrocardiogram (ECG) and electroencephalogram (EEG). All carriers have reasonable charge screens or, in the case of radiologist services, fee schedule alowances for professional, technical, and global charge services.

[4] Note: This is true even if the service for a hospital patient is performed in a physician's office because of the requirement in the statute for all non-physican services provided to hospital patients to be paid only to the hospital.

The third group is made up of physician pathology services (primarily anatomic pathology). As described in chapter II, these services are currently paid on a customary, prevailing, and reasonable charge basis, although OBRA of 1989 contemplates a separate physician pathology service fee schedule beginning January 1, 1991. Although we do not now expect to implement this provision (for the reasons discussed in chapter II), our analysis leading up to implementation led us to conclude that it is very difficult to arrive at reasonable estimates of the cost (or value) of the technical components of pathology services. Some carriers do not distinguish payment for professional and global pathology services. In other cases, payment distinctions based on historical charges are irrational.

We considered basing the technical component as equal to the difference in average allowed charges for global pathology services (provided by independent laboratories) and professional component only services provided for hospital patients. However, the data did not support any rational comparison. Our operating assumption at this time is that the technical component cost is limited; virtually all the physician resources required are contained within the professional component. However, the College of American Pathologists is interested in pursuing this issue and has contracted with Abt Associates to do further analysis of technical component costs.

Treatment of Technical Component Services Under the Fee Schedule

At this time, we propose to treat technical component services as follows under the fee schedule, although the availability of data and other considerations could lead us to modify or reconsider these approaches over the coming months.

Radiology Services. 1. The global RVU will be the sum of the professional component and technical component RVUs.

2. The professional component RVU value will be derived from the existing radiologist fee schedule (as adjusted to be consistent with the Harvard data as discussed in chapter II) and divided into physician work, overhead, and malpractice components. The allocation of RVUs into these components (necessary for application of the geographic adjustment factors) will be based on historical practice cost percentages for radiologists who do not own their own equipment.

3. The technical component RVU value from the existing radiologist fee schedule will be treated essentially as practice costs are treated for all other physician services. That is, the technical component RVUs under the fee schedule will be equal to the estimated average allowed costs for each service determined by multiplying the radiologist fee schedule technical component RVUs for each service by the estimated national average conversion factor under the radiologist fee schedule. We are considering two options for the application of the GPCIs to technical components. One would be to subject the technical component to the overhead GPCI only. The other option would subject the technical component to both the overhead and the malpractice GPCIs. The justification for the first option is that there is a lack of data on malpractice costs for nonphysician providers technical services. The justification for option 2 is that it might be accurate (even if more complex) since there is likely a malpractice expense associated with the technical component.

Under the second option, the portion subject to each GPCI would be derived from historical practice cost data (for radiologists who do own their own equipment) to allocate all RVUs between the two remaining components—overhead and malpractice. For example, assume that the technical component RVU for a service was 100 and historical practice cost data showed overhead costs equal to 45 percent of revenue and malpractice costs equal to 5 percent of revenue. Setting work RVUs equal to zero, the total RVUs of 100 would be allocated 90 to overhead and 10 to malpractice.

As discussed in chapter II, all these RVUs based on the existing radiologist fee schedule would need to be rescaled to be expressed in the same units used for Harvard-produced physician work RVUs before payment amounts were computed.

Diagnostic Tests. The professional component of diagnostic test services provided by physicians will be treated like other physicians' services under the fee schedule. We will use the Harvard physician work RVU value and derive the overhead and malpractice RVUs from charge data.

We see two possible approaches to the technical component for diagnostic tests.

1. We could derive the total RVU value for the technical component service from the Harvard study. For purposes of applying the GPCIs, physician work would be presumed to be zero; the technical component would be considered to be overhead only or alternatively split into overhead and malpractice portions and allocated based on historical practice cost data for physicians performing the service.

2. Alternatively, we could disregard the Harvard study value for the technical component and develop an RVU based on current average allowed charges. The rationale for this approach would be that Harvard's technical component values are based strictly on extrapolation; they infer values for technical components based on the relationship between professional and technical components in historical charges with that relationship maintained under the RBRVS. The alternative approach would presume that current average allowed charges for technical components represent practice costs for providing the technical service. Note: Under this approach, where reliable technical component charges to not exist, they would be computed as the difference between the average allowance for the global service and the professional component.

At this time, we expect to use the second approach since the Harvard study has focused on physician work rather than the technical component.

Physician Pathology Services. Until such time as better data are available, including the results of the Abt study mentioned above, we are considering two options. Under one option, we would impute a technical component payment equal to a nominal percentage, say, 10 or 15 percent of the global fee under the fee schedule, until we had better data. Under a second option, we would assume that the technical component of physician pathology services is negligible and no distinction would be made between global service and professional component pathology services in computing payment amounts under the fee schedule.

C. Payment Modifiers

Background

There are two types of modifiers under the current payment systems. Modifiers to the procedure codes are used either to establish different payment amounts or to record descriptive information which does not affect payment levels. There are three levels of modifiers for HCPCS codes: Level 1 are CPT modifiers, level 2 are national HCPCS modifiers established by HCFA, and level 3 are local carrier unique modifiers. Carriers have always had autonomy in the use of other modifiers to reflect local practices (including local carrier unique modifiers). Transition to a national Medicare fee schedule requires

standardization in the use of all modifiers.

We anticipate that only modifiers for which we establish a national payment policy will affect payment. If there is no national payment policy governing the use of a modifier, there will be no differential payment based on the presence or absence of that modifier. However, we expect to permit carriers to continue use of local modifiers when they are used for purposes *other than payment* (e.g. utilization or medical review screening).

Multiple surgery (CPT 4 modifier 51 or code 09951) Sometimes surgeons perform more than one procedure during an operative session, resulting in the use of the multiple surgery modifier in billing for the procedures. BMAD data for 1988 indicate that the multiple surgery modifier was used for over 1.5 million allowed services.[5] When more than one procedure is performed, the issue arises whether Medicare should increase payment for the surgeon's services. Since payment for most surgical services is made on a global fee basis, we need to determine whether additional procedures performed are separate procedures which are separately billable or whether these additional procedures are incidental to the primary surgery and thus not separately billable.

As a practical matter, this requires a precise definition of the intra-operative procedures included as part of a primary surgery procedure so that we do not inappropriately make duplicate payments for procedures which are already included in the global fee for the primary surgery. We have recently received data from PPRC and the carriers that we will use to help do this. We intend to consult with PPRC, physician groups, and carriers to develop these definitions, and means of identifying when the use of multiple surgical modifiers is appropriate and inappropriate. As discussed in chapter II, the clarification of intraoperative procedures will affect the estimated frequency of services needed for computing the budget neutral conversion factor.

Carriers generally make additional payments to surgeons for additional procedures not incidental to the primary surgery. Carriers vary in the amounts of these adjustments, but most carriers make an adjustment of 50 percent for the next highest procedure, and additional payments of 20 percent to 50 percent for other procedures. Some carriers add adjustments for an infinite number of procedures, and some carriers will add adjustments for no more than 3 procedures.

The Harvard study did not measure or assign work values to the amount of added work associated with performing multiple surgical procedures. This is an area that needs to the studied in the future. Until better data is available, we see several different approaches we could take in establishing the national policy for payments for multiple surgeries. For example, we could establish a general policy using standard percentages that would be applied to the global payment amounts for any multiple surgery. Alternatively, we could base the adjustment on either the relative values or a standard percentage of the intra-operative work for the specific procedures that were performed.

If we establish a general policy using standard percentages that would be applied to the global fee amounts for the procedures performed, the policy will be easy to understand and easy to administer. We might apply the current practices of many carriers to the fee schedule by providing for 100 percent payment for the most expensive procedure, 50 percent payment for the second highest procedure and 20 percent for the third highest procedure, with a limit of payment for three procedures, regardless of the number actually performed.

A variation on this option might be to pay a different percentage, say, 40 percent (rather than 50 percent) of the fee schedule amount for the second procedure. Another option would be to base the add-on only on the intra-operative work of the second and subsequent procedures. The rationale for this option is that the intraoperative work would be less if additional surgery is performed through the same incision. Further, the pre- and post-operative work of multiple procedures does not increase to the same degree as the intra-operative work. Thus, we could pay a specified percentage, perhaps 40 or 50 percent, of the intra-operative work value for the second procedure, with lower percentages applying to any other procedures performed.

Yet another option would be to include payment for multiple procedures in payment for the primary procedure. This could be done, for example, by raising the relative values for the primary procedure by a proportional amount to reflect the average occurrence of bills for secondary procedures. This could be justified on the basis that payments for second and third procedures would average out among physicians performing primary procedures.

At this point, we anticipate establishing a general payment policy for multiple surgeries similar to that currently used by many carriers, such as paying 100 percent of the global fee for the most expensive procedure and 50 percent of the global fee or perhaps (more narrowly) of the intra-operative work portion of the global fee for the second most expensive procedure. If we allow payment for a third procedure, it would likely be limited to 20 percent. In any case, we do not expect to make additional payments for more than 2 or 3 procedures. This policy would apply whether one or more than one surgeon provided the services. However, as we acquire more information and experience with the Medicare fee schedule, we will review our policy on payment for multiple surgeries.

Where several surgeons each perform distinctly different unrelated procedures during a single operative session, the multiple modifier would not be used unless one of the surgeons performed multiple surgeries. Each physician would be paid for the surgery he or she performed.

Bilateral surgery (CPT 4 modifier 50 or code 09950) The bilateral modifier is used to indicate cases in which a procedure was performed on both sides of the body. BMAD data for 1988 indicate that there were almost 900,000 Medicare allowed services with this modifier. The issues in determining what kind of payment adjustment to make when the bilateral modifier is shown are quite similar to the issues that arise with regard to the multiple surgery modifier. We will need to identify surgical procedures which are typically bilateral in nature (e.g., 58600: "Ligation or transection of fallopian tube(s), unilateral or bilateral") and for which the bilateral modifier would not result in increased payment. We will consult with physician groups as to what services are typically bilateral and with carriers to determine when payment should be increased because of the bilateral modifier.

Carriers have typically paid 150 percent of the payment amount when they believed that the use of the bilateral modifier justified increased payment to the surgeon. As with the multiple modifier, we are considering several different approaches to increasing payment for services when

[5] Modifier usage reported in this section may be understand due to use of local modifiers in place of the established modifiers, and because physicians do not consistently report them. Thus, the frequency and expenditure data for modifier usage presented throughout this section must be considered minimums.

the bilateral modifier is appropriately used.

We could continue the historic practice of paying 150 percent of the global fee, by applying the 150 percent to the Medicare fee schedule amount since we have no information by which to judge the appropriateness of this adjustment. Slight variations of this are being considered, such as to pay 40 percent (rather than 50 percent) of the fee schedule amount for the second procedure. While a break with historic practice, this reduced payment amount may more appropriately avoid duplication of payment for work and overhead for bilateral procedures. The use of a standard payment adjustment without regard to the particular bilateral procedure being performed would be easy to understand and to administer.

Another option would be to adjust the payment to the surgeon by doubling the intraoperative work RVUs on a procedure by procedure basis so that the surgeon would be paid the full work RVUs for the intraoperative work, but for no additional preoperative or postoperative work. The payment adjustment would be more complex, including the additional complexity of determining whether there had been duplication within the intraoperative work (e.g., if only one incision is needed) that should be removed.

As discussed under multiple procedures, we could address the potential for duplication of work in the intraoperative work relative value for bilateral procedures by paying a percentage of the intraoperative work relative value for the second procedure (e.g., 40 or 50 percent).

At this point, we expect to use a general payment adjustment of 150 percent of either the global fee or perhaps (more narrowly) the intra-operative work portion of the global fee in cases in which the bilateral modifier should appropriately result in increased payment. However, as we acquire more information, we will review our decision.

Providers Rendering Less than the Global Fee Package (CPT 4 modifiers 54 or code 09954, 55 or code 09955, and 56 or code 09956) When more than one physician provides services that are part of a global surgical fee package, the following modifiers are used to identify the services provided by each:

—Surgical care only: modifier 54 or code 09954

—Preoperative management only: modifier 56 or code 09956

—Postoperative management: modifier 55 or code 09955

BMAD data for 1988 indicated almost 18,000 allowed services in which only intraoperative services were billed (modifier 54), about 117,000 allowed services in which only post operative services were billed (modifier 55), and about 72,000 allowed services in which only preoperative services were billed (modifier 56).

Under the current reasonable charge policy, the sum of all allowances for all practitioners who provided parts of the services included in a global fee (and who billed using one or more of these modifiers) are not to exceed the total amount of the allowance that would have been paid to a single practitioner under the global fee for procedure. This has been an issue, in particular, for global surgical packages in which some services are provided by ophthalmologists and optometrists. It has also been an issue when cardiologists provide some of the postoperative services included in a global fee for cardiac surgery provided by a thoracic surgeon.

We expect to continue to pay the same amount for surgical services when they are provided by several physicians as we would pay if only one physician provided all of the services in the global package. However, we need to establish national policies regarding how payment for these services will be made. Specifically, we need to decide whether carriers will pay each physician separately for his or her part of the service or whether the carrier will pay the surgeon, who will then decide the payment among the physicians who provide the pre and/or postoperative services. In addition, we need to decide how the global fee will be divided among physicians: whether there will be a standard percentage distribution that will apply to all global surgeries or whether the division will vary by procedure.

One alternative on the billing/payment issue is for each physician to bill using the appropriate modifier and the carrier to pay each physician directly for the services he or she provided to the beneficiary. This could be difficult for carriers to administer if physicians do not use the appropriate modifiers; overpayments and/or denials could result and resolution becomes problematic.

If this option is chosen, in order to reduce duplicate payments, we could use computer-matching to identify instances where several physicians billed for services for the same patient within a time period around the use of an operating room and check whether reduced modifiers were being used appropriately. However, computer-matching will not fully resolve these issues because patients may have multiple conditions and several physicians may be appropriately billing unreduced modifiers during any given time period. Detailed medical review to determine legitimate unmodified bills from duplicate bills may also be required to the extent administratively feasible and cost justifiable.

The second alternative is to permit only one practioner to bill for the global services (e.g., the operating surgeon), regardless of how many practitioners provided services included in the global fee and regardless of the extent of their services. However, this alternative may be problematic for the physician who would have to rely upon the primary practitioner for payment because it would require physicians providing different parts of the global package to negotiate payments among themselves. It could be difficult to distinguish between appropriate distributions of the global fee and illegal kickbacks or referral fees. Also, the limiting charge and copayment would be based on the global payment and on the assignment status of the primary provider, which may cause beneficiaries confusion with regard to their liability for charges from the other providers.

While administratively it would obviously be simpler to make a single global fee payment to a primary provider for all of the services required during the global period, there are substantial legal and practical impediments to this approach. Therefore, in the absence of a change in the statute, we expect to permit separate billing and separate payment to physicians who provide parts of the services paid under the global fee (not to exceed what would be paid to a single physician). However, we intend to explore development of legislative proposals that would resolve the legal and practical impediments to making payment to a single provider regardless of the number of providers who rendered services within the global package.

There are several alternatives regarding establishment of the payment differentials for parts of the global fee. We could establish a standard split (e.g., 5 percent preoperative, 80 percent intraoperative and 15 percent postoperative) that would be applied to the global fee regardless of the procedure (or combination of procedures). This would be easy to administer and easy to understand. However, regardless of the percentages we choose, it is unlikely that we could

choose one that would apply equitably to all procedures.

A second approach would be to divide the global fee based on the work RVUs or the total RVUs in each component. This would mean establishing a different percentage for each procedure and would be more complex to administer.

Moreover, under both of these alternatives, there may be additional complications when postoperative services are divided between physicians (e.g., inpatient care vs. outpatient care). We would need to decide in such cases whether to split the postoperative payment further and on what basis to split it (e.g., a per diem rate, a per visit rate).

At this point, we anticipate establishing the global payment based on the second approach. In the unusual cases in which several physicians provide post-operative services, the payment for the post-operative services would be divided between the physicians based on the number of days for which each physician was responsible for providing post-operative care. In these cases, the physicians would be required to indicate when responsibility for the post-operative care shifted from one physician to the other so that carriers could calculate the payments on an individual case basis.

Physicians who assist at surgery (CPT modifiers 80 or code 09980, 81 or code 09981, and 82 or code 09982). There are circumstances in which a surgeon requires the assistance of another physician in surgery.

Current payment policy provides that payment for an assistant at surgery may not exceed 20 percent of the prevailing charge for the surgical procedure. Wide variations in the use of assistants at surgery and the substantial use of primary care physicians as assistants at surgery, suggests that the use of assistants at surgery is largely at the discretion of the surgeon and may frequently not be medically necessary. As part of its fiscal year 1991 budget, the Administration has proposed that Medicare pay the same amount for a surgical procedure regardless of whether or not the primary surgeon elects to use an assistant at surgery to whom Medicare makes a separate payment. Any payments made to assistants at surgery would reduce the payment to the primary surgeon.

We think that the likely reduction in payment to surgeons under the RBRVS will provide incentives for surgeons to use each other as assistants at surgery and thereby to recoup some expected losses. At the same time, one can argue that the Harvard RVUs for surgical services are the same whether or not an assistant at surgery was used. While an assistant may provide "another pair of hands" to, for example, hold a retractor, absent the physician assistant at surgery, this service is frequently performed by an operating team nurse, physician assistant or resident.

In light of the above, we are considering numerous options, not necessarily mutually exclusive, for dealing with assistants at surgery under the fee schedule:

—Eliminating all payment for assistant at surgery under the fee schedule, on the grounds that the RVS reflects the total work of the surgical procedure and that the medical necessity for use of physicians as assistants has not been established.

—Establishing with physician groups a list of specific procedures/conditions warranting use of an assistant at surgery for which we would pay 20 percent of the surgeon's fee. We would note that the American College of Surgeons has agreed to furnish PPRC by the fall of 1990 a listing of procedures which in their judgement always, never or sometimes require an assistant at surgery.

—Retaining the current policy of paying 20 percent of the primary's surgical fee to physicians who assist at surgery.

—Paying 20 percent of the intra-operative portion of the global fee so that payments would not be based on preoperative and post-operative services that the assistant at surgery does not provide.

—Paying 20 percent of only the physician's intra-operative work component (e.g., excluding overhead related to the intra-operative work). This would not only prevent payment for preoperative and post-operative services the assistant does not provide, but avoid payment for overhead that might not be as great for assistants at surgery as for the primary surgeon.

—Pay for assistants at surgery only upon the authorization by a Peer Review Organization (PRO) (i.e., prior authorization except for emergency surgery). This would create an incentive to use physicians as assistants at surgery only when necessary.

Two surgeons and surgical team (CPT 4 modifiers 62 or code 09962 and 66 or code 09966). We recognize that there are valid circumstances when the procedure being done requires the participation of two surgeons or a surgical team (more than 2 surgeons). In these cases, the additional physicians are not acting as assistants at surgery, but because of the procedure (or procedures) and/or the patient's particular condition, two surgeons or a surgical team are required to meet the patient's surgical needs.

Under the fee schedule, one alternative would be to divide the global payment for the procedure evenly between the surgeons involved. In this way, we would not create an incentive to use more than one surgeon.

As in the case of physicians who serve as assistants at surgery, we have no specific information on the physician work involved when two surgeons or a surgical team share the work that would justify increased payment for these surgeries when two surgeons or a team is used rather than one surgeon. Similarly, the argument can be made that the RVUs presented represent all of the physician work in the surgery, regardless of the use of two surgeons or a surgical team. As with assistants at surgery, we have come to no conclusions on whether to make additional payment because of this modifier. We expect to consult with physician groups to obtain further information on this issue.

Unusual services (CPT 4 modifier 22 or code 09922) or reduced services (52). There are cases in which the service provided is greater than or less than that usually required for the listed procedure. In these cases, the unusual services modifier ((22) or code 09922) or the reduced services modifier (52) is used. In 1988, BMAD indicates modifier 22 was reported in about 1.5 million allowed services and modifier 52 was used for almost 4.3 million allowed services. We are considering whether to permit carriers to increase or decrease payment for very unusual circumstances, based on their review of applicable medical records or other documentation. We would expect these cases to be very rare because the RVU based payments will be computed as an average payment, recognizing that there is variation among individual patients treated.

Multiple modifiers. Carriers vary in how they pay for and process claims with multiple modifiers. In practice, all modifiers that apply are used on the claims unless the carrier's claims processing system cannot accept multiple modifiers. In that case the CPT-4 modifier "99" or code "09922" is used to flag the claim for manual processing.

A national policy regarding the application of multiple modifiers is necessary in order to establish nationally uniform and consistent payments. There are several different approaches. We could apply each of the separate payment adjustments that

apply to each modifier. However, under this option, the potential exists for the payment to far exceed what payment would have been for the procedure without modifiers. Moreover, the appropriateness of the payment adjustments becomes increasingly difficult to judge when there are multiple modifiers.

Another possibility is to specifically limit the amount of payment adjustments that could be made to a fixed percentage of the base payment for the procedure. For example, pay no more than 160 percent of the global fee, regardless of the number of modifiers that apply. However, this could be difficult to define and to apply since several of the most commonly used modifiers are used when more than one procedure is performed (e.g., multiple surgeries and bilateral surgeries).

A third option is for us to specifically limit the number of modifiers that could apply. For example, we might only adjust payment for a maximum of two modifiers. Physicians would be instructed to include only a maximum of two modifiers on the bill and carriers would apply the applicable modifier policies if they determined that the two modifiers were appropriate.

Limiting the number of modifiers that would result in payment adjustments to a maximum of two modifiers seems to be a reasonable solution. It provides for payment increases in the unusual circumstances in which more than one modifier is appropriate, but it limits the additional complexity and payment to two modifiers of the physician's choice (with carrier review of necessity). Moreover, it may moderate any incentive to maximize use of modifiers to increase payment for surgical service. In any case, the physician could use the unusual circumstances modifier (22) which would request carrier review.

We expect to work closely with physician groups to establish nationally uniform policies as to when use of multiple modifiers is appropriate and to ensure that our policy in this regard is in accord with acceptable standards of practice.

Multiple patients and single patient modifiers on nursing home visit bills (HCPCS alpha-numeric modifiers MP and SP). The multiple patient (MP) and single patient (SP) modifiers are currently used to identify visits to patients in nursing or domiciliary care homes (other than skilled nursing care facilities). Our current payment policy limits payment for routine visits to multiple patients in these facilities to payment that would be made for a follow-up office visit. Payment for a routine visit to a single patient in one of these facilities is limited to what payment would be for a follow-up home visit. Payment for a visit to treat an acute condition is made of whatever visit level reflects the services provided, regardless of the number of patients seen at the facility.

The Harvard team will provide us with values for the physician work involved in visits to patients in these facilities, and the practice expense and professional liability insurance relative values will be calculated based on the historic allowed charges for these services. After we receive the data, we will consider whether to continue the current payment policy for these services and whether to continue use of these modifiers.

Services of non-physician practitioners when there is no physician-patient encounter. We may want to establish a payment differential and a corresponding modifier for services provided by a non-physician practitioner without a physician-patient encounter. For example, when a beneficiary visits a physician's office for a minimal office visit with a nurse practitioner who is employed by the physician, should Medicare pay for the visit as it if were done by a physician? The payment that will be established under the Medicare fee schedule is based on the assumption that there is physician work in the visit since Harvard's RVUs are for physician work. When there is a physician-patient encounter as well as an encounter between the non-physician practitioner and the patient, the visit would be billed as a physician visit. However, if there is no physician-patient encounter during the visit, then the resources invested by the physician in the visit are practice expenses (employee salaries, fringe benefits, supplies, etc.) and malpractice expenses.

One option is to pay the same amount whether it is performed by a physician or a non-physician practitioner. This option pays physicians for work they did not personally perform but appears consistent with our current policy (see section 2050 of the *Medicare Part B Carriers Manual*).

Another option is to compensate physicians for only the practice expense and professional liability portions of the payment for the service when it is not provided by a physician. This creates an incentive for the physician to see the patient for at least a brief moment so that he can bill for the visit at the higher physician rate.

A third option is to include part of the physician work RVU in the payment amount since the physician takes professional responsibility for the services provided by the non-physician practitioner in his employ and can arguably be thought to provide professional services to the patient through supervision of the non-physician practitioner.

We are undecided on how we will address payment for non-physician practitioners employed by physicians under the Medicare fee schedule when there is no patient-physician encounter. We expect to continue to consider the alternatives regarding this question. In addition, the PPRC expects to investigate this issue through the coming year, as mentioned in chapter 2, and we hope that effort will provide additional information regarding this issue.

Modifiers That Will Not Affect Payment Levels. The presence or absence of the following modifiers will not affect (increase or decrease) payment levels under the Medicare fee schedule, although they may continue to be used for administrative purposes, including utilization reviews.

• *CPT 4 modifiers that will not affect payment:*

20 Microsurgery
23 Unusual anesthesia
32 Mandated services
47 Anesthesia by surgeon
75 Concurrent care
76 Repeat procedure by same physician
77 Repeat procedure by another physician
90 Reference laboratory

Similarly, we expect to exclude from consideration for payment purposes CPT codes for special services and reports that serve a similar purpose as the unusual services modifier. For example:

—"After hours" services codes 99050 and 99052
—Extra supplies and materials codes 99070 and 99071
—Prolonged physician attendance codes 99150 and 99151
—Unusual travel code 99082

• *HCPCS alpha-numeric modifiers that will not affect fee schedule payment amount*

AT Acute treatment
ET Emergency treatment
LT Left side of body
QC Single channel monitoring
QD Recording and storage in solid state memory by digital recorder
QT Recording and storage on tape by an analog tape recorder
RT Right side of body
SF Second opinion ordered by a Peer Review Organization[6]

[6] When a second opinion is ordered by a Peer Review Organization (PRO), the law specifies that payment will be made at 100 percent of the fee

Continued

YY Second surgical opinion
ZZ Third surgical opinion

• *Carrier unique local modifiers (HCPCS level 3 modifiers beginning with the letters w,x,y, or z)*

No payment differential will be allowed based on carrier unique local modifiers, although carriers may continue to use carrier unique local modifiers for medical review, screening and administrative purposes.

D. Participating Physician Differential

Section 1848(h) of the Social Security Act, as enacted by Public Law 98–369 (the Deficit Reduction Act of 1984) defined a Medicare participating physician or supplier as one who agrees voluntarily to accept Medicare reimbursement as payment in full for all part B services. Over the years a number of incentives have been established in the law to encourage physicians and suppliers to participate and participation rates have increased as a result. One of the most important incentives is a higher payment for Medicare services performed. Currently, under the customary, prevailing, and reasonable rules implementing section 1848(b)(4)(A)(iv) of the Act, the nonparticipating physician reasonable charge for a service may not exceed 95 percent of the participating physician prevailing charge for a service.

Under the new physician fee schedule, in accordance with section 1848(a)(3) of the Act, this 95 percent policy will be continued. Nonparticipating physicians' allowed charges will be equal to only 95 percent of the full fee schedule amount (as noted in chapter VI, this 95 percent is the basis for the limiting charge to beneficiaries), while participating physician's allowed charges will be equal to the fee schedule amount. This participating physician differential must be taken into account in calculating the budget neutral conversion factor for 1992.

E. Health Manpower Shortage Area Bonus Payment

Another adjustment to be made to payments under the new physician fee schedule is the Health Manpower Shortage Area (HMSA) bonus, which was increased from 5 percent to 10 percent by section 1833(m) of the Act, as amended by section 6102(d) of OBRA 89, for services on or after January 1, 1991. In addition, the amendment broadened the applicability of the bonus to include all designated HMSAs, eliminating the restriction to class 1 and 2 areas under prior law. These manpower shortage areas, which are identified by the PHS pursuant to statutory guidelines, include both rural and urban areas, and bonus payments may be made in both rural and urban areas as of January 1, 1991. The bonus will be applied to payment amounts derived from the fee schedule, beginning in 1992.

F. Comparability Rule Under Fee Schedule

Under the Medicare part B customary, prevailing, and reasonable charge payment methodology currently in use, a statutory provision referred to as "comparability" authorizes adjustments to the payment amounts that would otherwise apply

Section 1842(b)(3)(B) of the Act provides that reasonable charge payments shall not be higher than the carriers' private business payments to their own policyholders and subscribers for comparable services under comparable circumstances. For a number of reasons, some carriers have found it difficult to enforce this provision vigorously. (One implication of this enforcement pattern is that 1991 expenditures for part B physicians' services will be higher than they would have been if enforcement had been more vigorous—an important point, since 1991 outlays are the base upon which fee schedule outlays will be computed.)

Chapter V—Implementation of the Fee Schedule and Standardized Payment Policies

The successful implementation of the Medicare Fee Schedule (MFS) and the uniform definitions required for payment policy standardization includes four principal elements:

(1) The preparation and issuance of clear instructions to carriers;

(2) Education and training of both providers and carriers;

(3) Carriers' calculation of payment amounts; and

(4) The validation of calculations and other carrier activities related to the fee schedule implementation.

These four elements have been integrated into an implementation schedule which will ensure that payments for physician services are made accurately and equitably on January 1, 1992, within the requirements of OBRA of 1989.

A. Schedule for Implementation

Wide variations in carrier payment policies exist largely as a result of the principle established in the original Medicare legislation under which carriers were allowed the discretion to implement policies and procedures appropriate for local circumstances. However, equitable implementation of the MFS depends on a payment system with uniform policies and procedures. Such policies should include standard definitions of services which are sufficiently clear to preclude variance in interpretation. Without this standardization, the actual work performed for a given service with a national relative value could vary widely among different localities, thus resulting in inequitable application of the fee schedule. It could also result in Medicare payments for services which are less comprehensive than intended. Therefore, HCFA has identified local carrier practices which must be modified or eliminated to establish a uniform fee schedule.

Some of the policies and practices which require such standardization strongly affect current payment algorithms, such as the global surgical definitions discussed in chapter III. Standardization is also required in carrier practices with little impact on payment algorithms. These include such data elements as the codes which designate the place or type of service.

Existing statutory and regulatory requirements and current carrier practices will be considered in the development of national definitions and policies. In the absence of legislative requirements or compelling policy rationale, the alternatives that are least disruptive to the physician community will be selected for nationwide implementation. Therefore, recognition of current carrier practices which affect a majority of providers and consultation with physician groups are important factors in the choice among standardization policy options.

To implement standardization, carriers will be required to make substantial changes to their claims processing and pricing systems, revise their local payment policy and billing manuals, train their staffs and conduct extensive provider education and training programs. The budget neutrality provisions of the legislation also require the development of a crosswalk between payment levels, based on the current coding and geographic conventions, and the corresponding payment levels under the uniform national policies.

In developing the schedule for implementation of uniform policies, several options were considered. One option was to implement all such policies on January 1, 1992, concurrent with the MFS. However, such changes would be impossible for carriers to implement accurately and for HCFA to

schedule amount. Neither the deductible nor the copayment apply to second opinions ordered by a PRO.

manage properly. Were multiple changes to be made simultaneously, their impact on the individual physician would be blurred, making it difficult to explain to physicians what to expect and maximizing uncertainty and confusion. It would be extremely difficult for HCFA and the carriers to determine whether implementation errors occurred and to locate and correct them.

The timetable for implementing the transition to the MFS is set by law. Payments under the transition rules must begin on January 1, 1992. To comply with the statute, the carriers will be engrossed in the calculation of the fee schedule amounts, new balance billing limits, transition payments and the participating physician enrollment process during the last 6 months of calendar year 1991. These activities will require computer programming and training of carrier and provider staffs, using the same resources that will be needed to implement the changes produced by standardization. The two activities cannot occur simultaneously without the risk of major operational problems. In addition, HCFA has moved over the last 2 years to place carriers into new systems which they share with other carriers. While this shared maintenance and shared processing approach is more cost-efficient, it demands greater efforts in coordination, planning and software releases. Therefore, to ensure a successful implementation of both, we propose the following schedule for standardizing payment policies and practices.

Standardization will be accomplished in four phases. Those issues which may be implemented solely by instruction to the carriers, such as the use of uniform codes for types and places of service, will be completed first. We plan for the first group of such issues to be implemented beginning January 1, 1991, with the 1991 reasonable charge update. The second group will be implemented beginning March 1, 1991 with the annual HCPCS update.

The final sets of standardized policies will be implemented only after the opportunity for public notice and comment including comment on the timing of any proposed early implementation. Certain of these issues, including the new global surgical definitions, and payment for minor surgeries and endoscopies, are scheduled for implementation on July 1, 1991. Others, such as new definitions of visits, payment for diagnostic tests and supplies with visits, and site of service differentials, will become effective on January 1, 1992.

Accurate and successful implementation is possible if these changes are made in such manageable increments. The proposed time frame will allow the attention to detail at the carriers necessary to minimize error. The approach will also contribute to physicians' understanding of the changes being made and allow them to anticipate and manage the impact on their office billing practices.

B. Instructions

Instructions are required to provide carriers with the payment policy and calculation information they need to implement the MFS and the uniform definitions. Claims processing instructions and billing requirements must also be issued to the carriers. To allow carriers sufficient time to work with the central maintainers to modify the claims processing systems and notify physicians of the new billing instructions, the issuance of required instructions should precede the date by which the instructions must be implemented by a minimum of 90 days.

Our current schedule for releasing instructions to the carriers is:

• October 1, 1990—Group I standardization issues scheduled for implementation beginning January 1, 1991

—Payment for specimen collection/handling fees
—Payment for injections
—Uniform specialty codes and designations for reporting purposes
—Site and type of service coding

• December 1, 1990—Group II standardization issues scheduled for implementation beginning March 1, 1991

—Coding for emergency room services
—Local modifiers

• April 1, 1991—Group III standardization issues scheduled for implementation beginning July 1, 1991:

—Global surgical packages
—Payment rules for minor surgeries and endoscopies
—Payment for travel and mileage

• September 1, 1991—Group IV standardization issues scheduled for implementation beginning January 1, 1992:

—Coding and payment rules for visits
—All other fee schedule issues

There will be ongoing consultation with the Medicare carriers, medical specialty societies and physician organizations such as the American Medical Association on these instructions.

C. Implementation at the Carriers

A number of discrete calculations must be performed before the payment amount for each service in each locality is obtained for 1992 and subsequent years. An approach that combines calculations by individual carriers with nationally developed data will utilize available resources in the most efficient manner and maximize the accuracy of the calculations. HCFA has used this approach with great success for handling Part A reimbursement.

If implementation of the national definition of a global surgical package occurs on July 1, 1991, it will require the repricing of customary and prevailing charges and MAAC billing limits for surgical procedures in most carrier jurisdictions. The amount of the adjustment at each carrier's site will be based on an analysis of historical data. For example, if the new global package includes 30 more days of postoperative care than the carrier's current policy, the historical data will be used to determine the average number of visits billed by all physicians for the surgical procedure within those additional 30 days that are now paid separately. The charges for the average number of additional visits would be added to the existing customary and prevailing charges to arrive at the new amounts; a similar adjustment would be made to balance billings limits.

The first calculation to be performed on a national basis for 1992 will be the computation of the average allowed charges for each service in each locality. These average allowances will be calculated across all physicians in all specialties. As described in chapter IV, in order to calculate payment amounts for those services on January 1, 1992, the average allowed charges must be compared to the MFS amounts to identify services subject to the transition rules for 1992–1995.

Standardization will also affect the average allowed charges for some procedures. The historical data used to calculate the average allowed charges may require adjustments to account for the new global surgical definition and other appropriate standard policies, using the same method employed to adjust customary and prevailing charges.

Because adjustments to the customary, prevailing and average allowed charges will be unique to each carrier, carriers will perform their own calculations. However, centrally developed information will be used to perform other functions. The first such software program will be known as the

carrier pricer. This program will calculate the MFS amounts, using the national conversion factor, the relative value units for the service by component, and the physician work, overhead, and malpractice geographic adjustment factors for the locality.

The MFS amounts determined by the pricer and the average allowed charges calculated by the carriers will be used by the second national software program, the transition amount calculator. This program will compare the average allowed charges to the MFS. If the average allowed charge is greater than 15 percent above or below the MFS amount, the program will calculate the appropriate blended payment amounts for 1992–1995. The transition charge limit calculator will determine each physician's charge limits under the new OBRA of 1989 rules.

Also, we will edit claims for compliance with the uniform payment policy. For example, carriers will analyze claims data to determine whether procedures included in a global surgical package have been billed for separately. If such fragmentation by physicians has occurred, carriers will rebundle the procedures.

D. Education and Training

Another important element in the implementation of the MFS and uniform policies is provider education and training. Compliance by the physician community affected by the changes and allaying of potential confusion caused by these reforms will be assured only if the carriers disseminate information timely. Standardization will result in changes in office billing procedures and require training of physicians' staffs or changes to their billing software. Because of the magnitude and complexity of the changes, HCFA believes that joint educational activities with professional medical and specialty associations would be effective in publicizing these changes. Furthermore, stringent professional education and training requirements have been established for the carriers.

Carrier staffs are being educated so that they can implement these changes and train physicians and physician staffs accurately and in advance of implementation. National conferences were held in January and July of 1990 to instruct HCFA Regional Offices and carrier staffs involved in claims processing, medical review, payment activities and provider relations. Attendees at these conferences received training on the MFS, MVPS, and beneficiary protection provisions, and directions on provider education. A third national conference will be held in May, 1991.

To provide the same information to their physician communities, carriers have initiated or increased their level of activities in all of the following areas:

- Preparing an annual Physician Payment Reform Provider Education and Training (PPR PET) Plan, detailing specific strategies for accomplishing their training goals;
- Establishing (or enhancing) speaker bureaus; actively seeking out opportunities to meet with physicians or medical societies or with beneficiary or lay groups; responding to requests for speakers for these groups;
- Setting up displays/demonstrations/booths at medical conventions, fairs, and the like, where participants can browse for pamphlets or other hand-out materials that provide information about payment reform;
- Publishing periodic newsletters or bulletins concerning all changes. Due to the magnitude of the changes, carriers will need to increase the frequency of these issuances. The language for many of these bulletins has been and will be prepared by HCFA to ensure uniformity in the information received by providers. Bulletins on the MVPS and mandatory physician/supplier submission of claims were published in early summer.
- Staffing with one or more persons to serve in an ombudsman capacity to troubleshoot for providers having difficulty with technical/billing issues or mechanisms of payment reform;
- Strengthening the link between carrier medical directors and physicians; and
- Formal briefing with State and local medical societies on each provision prior to implementation.

E. Validation of Carrier Implementation

The final element in the implementation of the MFS is the validation of carrier activities. HCFA Regional Offices will oversee the implementation by carriers, using stringent review protocols established by Central Office. These Regional Office reviews will look behind the methodology and verify the accuracy of all carrier-specific calculations, such as the recomputation of customary and prevailing charges to conform to the uniform definitions and the calculation of the adjusted historical payment amount. The Regional Offices will also review the carrier systems to ensure that the standard software packages have been installed correctly. Once installed, these packages will be tested to validate the resulting payment amounts.

Chapter VI—Improvements in Beneficiary Financial Protection

A. Limits on Balance Billing for Unassigned Claims

Section 1848(g) of the Act, as added by section 6102 of OBRA of 1989, contains a number of provisions of direct interest to Medicare beneficiaries. Most importantly, beneficiary protection from charges in excess of the Medicare allowed charge has been significantly increased under OBRA of 1989. The MAAC which now can differ by physician and service will be replaced by a new limiting charge, effective January 1991.

As the new rules phase in over the next several years, charges for unassigned claims will not exceed 125 percent of the nonparticipating prevailing charge in 1991, will not exceed 120 percent of the fee schedule payment to a nonparticipating physician in 1992, and will not exceed 115 percent of the fee schedule payment to a nonparticipating physician in 1993 and subsequent years. (During 1991 and 1992, balance billing is limited to the lower of (1) the percentage by which the prior year's MAAC exceeds the prior year's prevailing, or (2) the new percentage limit, i.e., 125 percent in 1991, 120 percent in 1992.)

Under the fee schedule nonparticipating physicians' services will continue to be paid 95 percent of the Medicare Part B payment that would be payable to a participating physician, i.e., 95 percent of the "full" fee schedule amount. Thus the limiting charge will be, for example, 109.25 percent (.95 × 115 percent) of the full fee schedule amount in 1993 and subsequent years.

B. Mandatory Physician Submission of Unassigned Claims

All physicians and suppliers are required to complete and submit claims at no charge to beneficiaries for Medicare covered services performed on or after September 1, 1990. Claims must be submitted within 1 year from the date of service. Payment for assigned claims not submitted within this time period will be reduced by 10 percent. Providers who repeatedly fail to submit unassigned claims may be subject to civil monetary penalties of up to $2,000. This provision is expected to reduce a substantial administrative burden for Medicare beneficiaries and it will result in faster, higher quality expenditure data for MVPS administration.

C. Mandatory Assignment for Claims from Qualified Medicare Beneficiaries

Sections 1902(a)(10)(E) and 1905(p) of the Social Security Act, as enacted by the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360), mandated that, effective April 1, 1990, States pay Medicare cost-sharing expenses for part B enrollees with incomes below the Federal poverty line who would not otherwise be eligible for Medicaid (so-called "qualified Medicare beneficiaries" or QMBs). Under this provision, States are required to pay the Medicare deductible, premium, and coinsurance for QMBs who apply for this benefit. Federal matching funds are provided to States for this purpose on the same basis as for other Medicaid expenditures. Although Medicare/Medicaid dual eligibles had been protected from balance billing under prior law, the new catastrophic legislation did not clearly prohibit balance billing for the newly defined "QMB" group. Section 1848(g)(3) of the Act as added by OBRA of 1989 resolved this ambiguity by making clear that QMBs are protected from balance billing as well as all other potential sources of out-of-pocket costs for Medicare services.

D. Monitoring of Charges, Utilization, and Access

In addition, section 1848(g)(6) requires the Secretary of HHS to monitor charges by nonparticipating physicians and changes in the proportion of expenditures attributable to services provided by participating physicians on an assigned basis. The Secretary must develop and submit to Congress recommendations to address any significant decreases in these assignment and participation rates. Section 1848(g)(7) also requires the Secretary to monitor changes in utilization and beneficiary access to services, possible sources of inappropriate utilization, and factors influencing these trends. The Secretary must provide both of these monitoring reports to Congress by April 15 each year, beginning in 1991 for utilization and access and 1992 for charges.

Addendum A—Technical Documentation/Explanation and Guide to Use of Model Fee Schedule Tables

As explained in chapter II, OBRA of 1989 provides that fee schedule payment amounts are the product of three elements—a relative value for the service, a geographic adjustment factor for the locality, and a nationally uniform dollar conversion factor. The law also provides for, in effect, separate adjustment of the work, overhead and malpractice components of the total RVUs by a geographic adjustment factor appropriate to that component. (As explained in chapter II, GPCI values are used to fulfill the statutory requirement for geographic adjustment factors.) Thus we have developed this working formula for computing a payment amount for a procedure in a locality:

Payment=[(RVUw×GPCIw)+(RVUoh×GPCIoh)+(RVUm×GPCIm)]×CF

where

RVUw=physician work relative value units for the service

RVUoh=overhead relative value units for the service

RVUm=malpractice relative value units for the service

GPCIw=geographic practice cost index value for physician work applicable in the locality [1]

GPCIoh=geographic practice cost index value for overhead applicable in the locality

GPCIm=geographic practice cost index value for malpractice applicable in the locality

CF=uniform national conversion factor

To compute a payment amount for a specific service in a particular locality using the preliminary estimates computed for this model fee schedule, use the listing of HCPCS codes in Addendum B to locate that service. Then make a note of the RVUs for work, overhead, and malpractice for that service. Next use Addendum C to obtain work, overhead and malpractice geographic practice cost index values for the particular locality. Finally, use $1.00 [2] as the uniform national conversion factor. Combining the elements as specified in the formula above will yield an estimated payment amount.

For example, to compute the payment amount for skin biopsy (HCPCS code 11100) in Birmingham, Alabama, first locate HCPCS code 11100 in Addendum B. Note that the RVUs for work, overhead, and malpractice are as follows:

Work RVU (RVUw)=25.5
Overhead RVU (RVUoh)=17.8
Malpractice RVU (RVUm)=1.0

Next, locate Birmingham in Addendum C. Note that the GPCI values for work, overhead, and malpractice are as follows:

Work GPCI (GPCIw)=0.981
Overhead GPCI (GPCIoh)=0.913
Malpractice GPCI (GPCIm)=0.826

Finally, using $1.00 as the uniform national conversion factor, place the values into the given formula and compute:

Payment=[(RVUw×GPCIw)+(RVUoh×GPCIoh)+(RVUm×GPCIm)]×CF
Payment=[(25.5×0.981)+(17.8×0.913)+(1.0×0.826)]×$1
Payment=[25.0155+16.2514+0.826]×$1
Payment=[42.0929]×$1
Payment=$42.09

Addendum B—Relative Value Units by Service

BILLING CODE 4120-03-M

[1] This value reflects only one-fourth of the variation in physician work, as required by OBRA of 1989.

[2] The relative values in Addendun B were computed using a method to produce a conversion factor of $1.00. (See chapter II for a discussion of the methodology.) However, while the $1.00 conversion factor is not arbitrary, like both the relative values in Addendum B and the GPCIs in Addendum C, it is preliminary, for the following reasons:

- Neither the relative values nor the $1.00 conversion factor account for payment changes since 1988.
- Only about 1400 services were used to compute this conversion factor, and Harvard is resurveying many of these services.
- A number of policy decisions (e.g., global surgical fees and visit coding) will affect the relative values and the estimated distribution of services.
- We may need to adjust the data and conversion factor to preserve budget neutrality.
- Anesthesia relative values were excluded because time unit data were not readily available.

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
11100	BIOPSY OF LESION		25.5	17.8	1.0	44.3
11101	BIOPSY, EACH ADDED LESION		15.6	10.2	0.5	26.3
11200	REMOVAL OF SKIN TAGS		17.8	14.2	1.1	33.1
11201	REMOVAL OF ADDED SKIN TAGS		13.7	6.0	0.4	20.1
11400	REMOVAL OF SKIN LESION		21.1	15.5	1.4	38.0
11401	REMOVAL OF SKIN LESION		24.4	19.5	1.7	45.6
11402	REMOVAL OF SKIN LESION		32.9	26.1	2.8	61.8
11403	REMOVAL OF SKIN LESION		45.0	35.8	5.1	85.9
11404	REMOVAL OF SKIN LESION		62.5	45.2	7.5	115.2
11406	REMOVAL OF SKIN LESION		91.7	62.4	12.6	166.7
11420	REMOVAL OF SKIN LESION		21.9	16.2	1.5	39.6
11421	REMOVAL OF SKIN LESION		27.4	21.2	1.9	50.5
11422	REMOVAL OF SKIN LESION		37.6	28.8	3.1	69.5
11423	REMOVAL OF SKIN LESION		51.0	40.8	5.7	97.5
11424	REMOVAL OF SKIN LESION		69.1	47.2	7.4	123.7
11426	REMOVAL OF SKIN LESION		92.6	60.9	11.4	164.9
11440	REMOVAL OF SKIN LESION		25.5	20.9	1.7	48.1
11441	REMOVAL OF SKIN LESION		30.4	26.2	2.1	58.7
11442	REMOVAL OF SKIN LESION		40.9	32.8	2.9	76.6
11443	REMOVAL OF SKIN LESION		60.3	44.1	4.6	109.0
11444	REMOVAL OF SKIN LESION		73.9	49.1	5.1	128.1
11446	REMOVAL OF SKIN LESION		89.0	58.0	7.7	154.7
11450	REMOVAL, SWEAT GLAND LESION		114.7	65.8	12.1	192.6
11451	REMOVAL, SWEAT GLAND LESION		176.5	66.7	9.0	252.2
11462	REMOVAL, SWEAT GLAND LESION		104.4	64.1	10.0	178.5
11463	REMOVAL, SWEAT GLAND LESION		122.2	111.6	18.0	251.8
11470	REMOVAL, SWEAT GLAND LESION		110.4	61.6	11.3	183.3
11471	REMOVAL, SWEAT GLAND LESION		146.6	98.2	16.7	261.5
11600	REMOVAL OF SKIN LESION		42.5	35.4	2.8	80.7
11601	REMOVAL OF SKIN LESION		45.0	43.0	3.1	91.1
11602	REMOVAL OF SKIN LESION		64.0	56.6	4.5	125.1
11603	REMOVAL OF SKIN LESION		78.7	70.2	7.3	156.2
11604	REMOVAL OF SKIN LESION		95.6	80.6	10.3	186.5
11606	REMOVAL OF SKIN LESION		138.8	103.5	18.5	260.8
11620	REMOVAL OF SKIN LESION		42.8	40.9	3.3	87.0
11621	REMOVAL OF SKIN LESION		51.6	54.5	4.0	110.1
11622	REMOVAL OF SKIN LESION		72.7	70.3	5.9	148.9
11623	REMOVAL OF SKIN LESION		87.8	79.8	8.7	176.3
11624	REMOVAL OF SKIN LESION		94.4	99.1	12.6	206.1
11626	REMOVAL OF SKIN LESION		149.0	114.4	17.7	281.1
11640	REMOVAL OF SKIN LESION		51.8	53.2	3.9	108.9
11641	REMOVAL OF SKIN LESION		68.8	67.6	4.8	141.2
11642	REMOVAL OF SKIN LESION		85.4	84.2	6.7	176.3
11643	REMOVAL OF SKIN LESION		105.3	96.2	9.3	210.8
11644	REMOVAL OF SKIN LESION		129.7	112.1	11.6	253.4
11646	REMOVAL OF SKIN LESION		141.5	137.2	17.9	296.6
11900	INJECTION INTO SKIN LESIONS		12.3	7.9	0.4	20.6
11901	ADDED SKIN LESION INJECTIONS		20.3	13.0	0.6	33.9
11950	THERAPY FOR CONTOUR DEFECTS		62.5	24.2	1.9	88.6
11951	THERAPY FOR CONTOUR DEFECTS		87.2	22.8	1.7	111.7
11954	THERAPY FOR CONTOUR DEFECTS		37.0	15.7	3.7	56.4
12001	REPAIR SUPERFICIAL WOUND(S)		24.4	17.0	1.7	43.1
12002	REPAIR SUPERFICIAL WOUND(S)		33.2	23.3	2.4	58.9
12004	REPAIR SUPERFICIAL WOUND(S)		43.3	32.4	3.6	79.3
12011	REPAIR SUPERFICIAL WOUND(S)		32.6	20.7	2.1	55.4

1/ Values may change prior to implementation, as discussed on pp. 3-5. Also, HCPCS codes shown are from the 1986 version of HCPCS

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
12013	REPAIR SUPERFICIAL WOUND(S)		41.7	28.1	2.9	72.7
19100	BIOPSY OF BREAST		34.8	22.9	4.9	62.6
19101	BIOPSY OF BREAST		103.2	84.7	20.4	208.3
19120	REMOVAL OF BREAST LESION		128.8	107.5	27.0	263.3
19140	REMOVAL OF BREAST TISSUE		205.5	164.8	41.6	411.9
19160	REMOVAL OF BREAST TISSUE		175.6	137.8	35.0	348.4
19162	REMOVE BREAST TISSUE, NODES		378.7	361.3	91.9	831.9
19180	REMOVAL OF BREAST		251.9	209.8	52.8	514.5
19182	REMOVAL OF BREAST TISSUE		395.5	224.8	56.0	676.3
19200	EXTENSIVE BREAST SURGERY		415.5	421.7	106.1	943.3
19220	EXTENSIVE BREAST SURGERY		470.4	423.5	105.0	998.9
19240	EXTENSIVE BREAST SURGERY		416.1	390.7	99.5	906.3
20500	INJECTION OF SINUS TRACT		18.7	10.4	1.2	30.3
20501	INJECT SINUS TRACT FOR X-RAY		35.1	13.0	1.6	49.7
20520	REMOVAL OF FOREIGN BODY		48.8	23.5	3.4	75.7
20525	REMOVAL OF FOREIGN BODY		172.3	71.6	13.7	257.6
20550	INJECTION TREATMENT		19.2	10.9	1.4	31.5
20600	DRAINAGE JOINT/BURSA/CYST		26.3	11.7	1.4	39.4
20605	DRAINAGE JOINT/BURSA/CYST		25.8	13.0	1.7	40.5
20610	INJECT/DRAIN JOINT/BURSA		25.5	13.5	1.8	40.8
20615	TREATMENT OF BONE CYST		29.1	17.5	2.3	48.9
21200	RECONSTRUCT LOWER JAW BONE		647.2	375.9	61.1	1084.2
21202	RECONSTRUCT LOWER JAW BONE		525.9	443.2	77.9	1047.0
21203	RECONSTRUCT LOWER JAW BONE		635.1	445.6	85.0	1165.7
21204	RECONSTRUCT UPPER JAW BONE		672.2	694.2	134.3	1500.7
21206	RECONSTRUCT UPPER JAW BONE		540.7	397.5	73.7	1011.9
21230	RIB CARTILAGE GRAFT		279.7	331.5	55.6	666.8
21235	EAR CARTILAGE GRAFT		235.3	185.6	26.1	447.0
21242	RECONSTRUCTION OF JAW JOINT		502.1	520.2	89.4	1111.7
21310	TREATMENT OF NOSE FRACTURE		25.5	31.9	3.8	61.2
21315	TREATMENT OF NOSE FRACTURE		70.0	51.7	8.0	129.7
21320	TREATMENT OF NOSE FRACTURE		95.6	89.1	14.8	199.5
21325	REPAIR OF NOSE FRACTURE		174.1	120.3	20.0	314.4
21330	REPAIR OF NOSE FRACTURE		256.2	196.6	32.4	485.2
21335	REPAIR OF NOSE FRACTURE		440.5	427.1	70.7	938.3
21337	REPAIR NASAL SEPTAL FRACTURE		111.0	90.8	14.5	216.3
21360	REPAIR CHEEK BONE FRACTURE		322.5	211.9	34.8	569.2
21365	REPAIR CHEEK BONE FRACTURE		528.6	363.5	61.4	953.5
21385	REPAIR EYE SOCKET FRACTURE		431.2	290.8	44.3	766.3
21386	REPAIR EYE SOCKET FRACTURE		467.1	315.4	47.4	829.9
21390	REPAIR EYE SOCKET FRACTURE		554.0	406.5	49.3	1009.8
21421	TREAT MOUTH ROOF FRACTURE		275.2	130.0	22.5	427.7
21440	REPAIR DENTAL RIDGE FRACTURE		140.6	133.6	20.2	294.4
21450	TREAT LOWER JAW FRACTURE		157.5	97.7	15.0	270.2
21451	TREAT LOWER JAW FRACTURE		252.5	176.9	26.5	455.9
21454	TREAT LOWER JAW FRACTURE		357.5	184.2	24.0	565.7
21455	REPAIR LOWER JAW FRACTURE		265.5	229.9	39.0	534.4
21461	REPAIR LOWER JAW FRACTURE		359.9	330.1	57.1	747.1
21462	REPAIR LOWER JAW FRACTURE		414.9	356.5	64.5	835.9
21470	REPAIR LOWER JAW FRACTURE		544.3	469.4	81.5	1095.2
21480	RESET DISLOCATED JAW		36.5	30.5	3.5	70.5
21485	RESET DISLOCATED JAW		91.7	64.1	9.1	164.9
24640	TREAT ELBOW DISLOCATION		17.6	24.2	2.3	44.1
27125	REVISE HIP WITH PROSTHESIS		476.4	738.4	134.1	1348.9
27126	REVISE HIP WITH PROSTHESIS		488.8	761.6	138.0	1388.4
27127	REVISE HIP WITH PROSTHESIS		563.0	946.2	171.8	1681.0
27130	TOTAL HIP REPLACEMENT, SIMPLE		713.0	1244.1	225.0	2182.1
27131	TOTAL HIP REPLACEMENT, COMPLEX		824.3	1218.9	221.0	2264.2
27135	TOTAL HIP REPLACEMENT, REVISION		827.6	1337.3	242.7	2407.6
27170	REPAIR/GRAFT FEMUR HEAD/NECK		412.1	605.0	109.4	1126.5

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
27175	TREAT SLIPPED EPIPHYSIS		40.9	36.4	6.6	83.9
27176	TREAT SLIPPED EPIPHYSIS		351.2	557.6	98.0	1006.8
27177	REPAIR SLIPPED EPIPHYSIS		394.6	527.9	98.7	1021.2
27190	TREATMENT OF SACRUM FRACTURE		74.2	73.5	12.2	159.9
27196	TREAT PELVIS DISLOCATION		63.4	44.0	4.7	112.1
27200	TREAT TAIL BONE FRACTURE		31.0	48.2	6.8	86.0
27210	TREAT PELVIS FRACTURE		114.7	142.3	24.9	281.9
27211	TREAT PELVIS FRACTURE		172.6	213.6	38.7	424.9
27214	REPAIR PELVIS FRACTURE(S)		422.4	410.4	73.4	906.2
27220	TREAT HIP SOCKET FRACTURE		139.7	127.7	22.4	289.8
27222	TREAT HIP SOCKET FRACTURE		225.1	187.3	33.4	445.8
27225	REPAIR HIP SOCKET FRACTURE		868.6	705.2	120.6	1694.4
27230	TREAT FRACTURE OF FEMUR		123.4	121.5	18.9	263.8
27232	TREAT FRACTURE OF FEMUR		239.0	278.7	50.2	567.9
27234	REPAIR FRACTURE OF FEMUR		724.4	647.1	116.4	1487.9
27235	REPAIR OF FEMUR FRACTURE		495.7	599.2	108.6	1203.5
27236	REPAIR OF FEMUR FRACTURE		518.3	626.8	114.4	1259.5
27238	TREATMENT OF FEMUR FRACTURE		205.8	153.3	25.3	384.4
27240	TREATMENT OF FEMUR FRACTURE		324.9	315.4	57.3	697.6
27242	REPAIR OF FEMUR FRACTURE		541.0	445.3	80.7	1067.0
27244	REPAIR OF FEMUR FRACTURE		515.9	603.6	109.8	1229.3
27246	TREATMENT OF FEMUR FRACTURE		121.3	146.6	26.3	294.2
27248	REPAIR OF FEMUR FRACTURE		436.6	409.6	74.4	920.6
27250	TREAT HIP DISLOCATION		127.0	107.7	18.3	253.0
27252	TREAT HIP DISLOCATION		157.2	153.5	27.7	338.4
27253	REPAIR OF HIP DISLOCATION		349.4	466.4	84.5	900.3
27256	TREATMENT OF HIP DISLOCATION		146.6	56.9	10.3	213.8
28200	REPAIR OF FOOT TENDON		93.8	120.8	21.2	235.8
28208	REPAIR OF FOOT TENDON		61.6	83.4	14.9	159.9
28220	RELEASE OF FOOT TENDON		52.7	89.4	17.5	159.6
28225	RELEASE OF FOOT TENDON		43.1	59.8	11.2	114.1
28230	INCISION OF FOOT TENDON(S)		51.0	56.2	10.1	117.3
28232	INCISION OF TOE TENDON		34.8	35.9	6.5	77.2
28238	REVISION OF FOOT TENDON		138.2	238.5	43.0	419.7
28240	RELEASE OF BIG TOE		60.6	69.4	12.5	142.5
28250	REVISION OF FOOT FASCIA		87.8	133.6	23.8	245.2
28260	RELEASE OF MIDFOOT JOINT		114.7	132.5	22.7	269.9
28261	REVISION OF FOOT TENDON		114.7	207.6	37.5	359.8
28262	REVISION OF FOOT AND ANKLE		255.3	209.8	37.0	502.1
28270	RELEASE OF FOOT CONTRACTURE		47.2	64.2	11.5	122.9
28272	RELEASE OF TOE JOINT, EACH		40.0	50.8	9.2	100.0
28280	FUSION OF TOES		47.5	59.7	9.9	117.1
28285	REVISION OF HAMMERTOE		82.1	98.8	17.9	198.8
28286	REVISION OF HAMMERTOE		89.0	122.1	22.2	233.3
28288	PARTIAL REMOVAL OF FOOT BONE		78.4	94.7	17.3	190.4
28290	CORRECTION OF BUNION		125.2	175.6	31.6	332.4
28292	CORRECTION OF BUNION		156.6	252.3	45.9	454.8
28293	CORRECTION OF BUNION		173.8	286.3	51.6	511.7
28294	CORRECTION OF BUNION		163.1	271.5	47.6	502.2
28296	CORRECTION OF BUNION		188.0	312.9	56.6	557.5
28298	CORRECTION OF BUNION		149.7	230.6	42.0	422.3
28300	INCISION OF HEEL BONE		143.3	210.4	39.8	393.5
28304	INCISION OF MIDFOOT BONES		126.4	192.7	34.8	353.9
28306	INCISION OF METATARSAL		108.3	172.9	31.3	312.5
28308	INCISION OF METATARSAL		101.4	156.9	28.4	286.7
28309	INCISION OF METATARSALS		141.5	240.6	43.0	425.1
28310	REVISION OF BIG TOE		74.5	108.7	19.7	202.9
28312	REVISION OF TOE		78.1	93.5	17.2	188.8
28315	REMOVAL OF SESAMOID BONE		83.6	113.2	20.6	217.4
28322	REPAIR OF METATARSALS		110.7	176.0	31.5	318.2

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
29815	SHOULDER ARTHROSCOPY		99.9	138.9	24.6	263.4
29819	SHOULDER ARTHROSCOPY/SURGERY		189.2	316.9	57.8	563.9
29820	SHOULDER ARTHROSCOPY/SURGERY		202.5	282.3	51.1	535.9
29822	SHOULDER ARTHROSCOPY/SURGERY		202.1	378.6	68.5	649.2
29823	SHOULDER ARTHROSCOPY/SURGERY		212.7	475.1	86.0	773.8
29870	KNEE ARTHROSCOPY		81.5	141.9	25.6	249.0
29871	KNEE ARTHROSCOPY/DRAINAGE		132.2	259.8	46.2	438.2
29872	KNEE ARTHROSCOPY/INFECTION		133.4	286.0	50.4	469.8
29874	KNEE ARTHROSCOPY/SURGERY		185.6	360.8	64.9	611.3
29875	KNEE ARTHROSCOPY/SURGERY		199.7	316.0	57.1	572.8
29876	KNEE ARTHROSCOPY/SURGERY		212.1	454.4	81.9	748.4
29877	KNEE ARTHROSCOPY/SURGERY		187.1	419.6	75.9	682.6
29879	KNEE ARTHROSCOPY/SURGERY		222.4	529.7	95.6	847.7
29881	KNEE ARTHROSCOPY/SURGERY		222.4	519.3	93.9	835.6
29882	KNEE ARTHROSCOPY/SURGERY		203.4	478.2	86.5	768.1
29887	KNEE ARTHROSCOPY/SURGERY		206.7	362.2	64.9	633.8
29890	ANKLE ARTHROSCOPY/SURGERY		115.0	169.6	30.7	315.3
29894	ANKLE ARTHROSCOPY/SURGERY		193.1	391.9	71.0	656.0
29895	ANKLE ARTHROSCOPY/SURGERY		188.9	362.4	66.0	617.3
29897	ANKLE ARTHROSCOPY/SURGERY		118.0	269.4	43.4	430.8
30400	RECONSTRUCTION OF NOSE		260.1	244.9	37.4	542.4
30410	RECONSTRUCTION OF NOSE		335.5	446.2	74.2	855.9
30420	RECONSTRUCTION OF NOSE		394.3	549.5	92.6	1036.4
30430	REVISION OF NOSE		139.1	72.4	11.1	222.6
30500	RESECTION OF NASAL SEPTUM		262.5	214.4	34.7	511.6
30520	REPAIR OF NASAL SEPTUM		223.0	280.5	46.5	550.0
30560	RELEASE OF NASAL ADHESIONS		31.3	16.3	2.7	50.3
30580	REPAIR UPPER JAW FISTULA		80.0	192.8	32.2	305.0
30600	REPAIR MOUTH/NOSE FISTULA		95.0	82.4	11.2	188.6
30620	RECONSTRUCTION INNER NOSE		277.0	314.3	51.8	643.1
30630	REPAIR NASAL SEPTUM DEFECT		180.1	194.4	31.8	406.3
31000	IRRIGATION MAXILLARY SINUS		11.2	14.4	2.3	27.9
31001	IRRIGATION MAXILLARY SINUS		14.8	20.2	3.2	38.2
31002	IRRIGATION SPHENOID SINUS		14.3	12.2	2.0	28.5
31020	EXPLORATION MAXILLARY SINUS		65.8	72.6	12.0	150.4
31021	EXPLORATION MAXILLARY SINUS		96.2	105.0	17.3	218.5
31030	EXPLORATION MAXILLARY SINUS		197.9	304.7	50.5	553.1
31031	EXPLORATION MAXILLARY SINUS		282.7	448.6	74.3	805.6
31032	EXPLORE SINUS,REMOVE POLYPS		215.1	312.9	51.5	579.5
31033	EXPLORE SINUS,REMOVE POLYPS		306.2	407.8	67.1	781.1
31050	EXPLORATION SPHENOID SINUS		186.8	163.7	27.2	377.7
31070	EXPLORATION OF FRONTAL SINUS		143.9	129.1	21.4	294.4
31075	EXPLORATION OF FRONTAL SINUS		214.8	282.2	46.2	543.2
31090	EXPLORATION OF SINUSES		427.5	660.5	109.8	1197.8
31300	REMOVAL OF LARYNX LESION		258.3	349.3	58.6	666.2
31360	REMOVAL OF LARYNX		604.0	690.8	117.5	1412.3
31365	REMOVAL OF LARYNX		822.5	981.4	167.8	1971.7
31368	PARTIAL REMOVAL OF LARYNX		846.3	990.4	166.5	2003.2
31370	PARTIAL REMOVAL OF LARYNX		396.5	622.9	104.5	1123.9
31400	REVISION OF LARYNX		135.8	363.4	60.3	559.5
31500	INSERTION OF WINDPIPE AIRWAY		61.9	35.2	3.4	100.5
31505	DIAGNOSTIC LARYNGOSCOPY		12.3	13.5	2.0	27.8
31510	LARYNGOSCOPY WITH BIOPSY		52.7	27.7	4.6	85.0
31511	REMOVE FOREIGN BODY, LARYNX		34.3	23.1	3.5	60.9
31512	REMOVAL OF LARYNX LESION		152.7	111.7	19.4	283.8
31515	LARYNGOSCOPY FOR ASPIRATION		49.1	37.5	6.0	92.6
31520	DIAGNOSTIC LARYNGOSCOPY		50.2	68.7	11.5	130.4
31525	DIAGNOSTIC LARYNGOSCOPY		69.1	61.9	9.9	140.9
31526	DIAGNOSTIC LARYNGOSCOPY		118.3	107.3	17.7	243.3
31527	LARYNGOSCOPY FOR TREATMENT		70.0	100.1	15.3	185.4

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
31528	LARYNGOSCOPY AND DILATATION		75.1	82.1	13.0	170.2
31530	OPERATIVE LARYNGOSCOPY		130.6	120.6	19.4	270.6
31531	OPERATIVE LARYNGOSCOPY		178.6	162.8	27.6	369.0
31535	OPERATIVE LARYNGOSCOPY		135.2	127.6	21.6	284.4
31536	OPERATIVE LARYNGOSCOPY		170.2	175.8	29.4	375.4
31540	OPERATIVE LARYNGOSCOPY		184.7	182.5	30.5	397.7
31541	OPERATIVE LARYNGOSCOPY		209.4	225.1	37.4	471.9
31561	OPERATIVE LARYNGOSCOPY		248.6	346.1	57.8	652.5
31570	LARYNGOSCOPY WITH INJECTION		175.3	178.3	29.6	383.2
31571	LARYNGOSCOPY WITH INJECTION		191.9	196.2	32.6	420.7
31575	FIBERSCOPIC LARYNGOSCOPY		45.3	49.4	8.1	102.8
31576	FIBERSCOPIC LARYNGOSCOPY		116.8	103.1	17.8	237.7
31578	FIBERSCOPIC LARYNGOSCOPY		216.6	152.8	26.2	395.6
31600	INCISION OF WINDPIPE		105.9	131.5	30.2	267.6
31601	INCISION OF WINDPIPE		125.5	138.3	27.5	291.3
31603	INCISION OF WINDPIPE		117.1	138.6	30.9	266.6
31605	INCISION OF NECK CARTILAGES		102.0	118.3	23.6	243.9
31610	INCISION OF WINDPIPE		161.7	211.6	43.0	416.3
31612	PUNCTURE/CLEAR WINDPIPE		29.3	28.6	4.9	62.8
31613	REPAIR WINDPIPE OPENING		67.0	75.7	14.5	157.2
31614	REPAIR WINDPIPE OPENING		150.6	196.0	34.6	381.2
31615	VISUALIZATION OF WINDPIPE		103.5	51.2	8.7	163.4
31620	BRONCHOSCOPY		129.1	82.5	18.9	230.5
31621	BRONCHOSCOPY		127.9	105.0	15.6	248.5
31625	BRONCHOSCOPY WITH BIOPSY		142.7	123.7	21.2	287.6
31626	BRONCHOSCOPY WITH BIOPSY		160.5	129.6	19.7	309.8
31627	BRONCHOSCOPY WITH BIOPSY		148.7	120.9	21.6	291.2
31628	BRONCHOSCOPY WITH BIOPSY		165.6	162.5	18.5	346.6
31630	BRONCHOSCOPY WITH REPAIR		195.8	111.2	21.0	328.0
31635	REMOVE FOREIGN BODY, AIRWAY		178.6	137.6	28.8	345.0
31640	BRONCHOSCOPY & REMOVE LESION		256.5	140.0	33.4	429.9
31645	BRONCHOSCOPY, CLEAR AIRWAYS		129.1	103.6	16.7	249.4
31646	BRONCHOSCOPY,RECLEAR AIRWAYS		108.9	77.4	13.4	199.7
31650	BRONCHOSCOPY, DRAINAGE		148.1	60.5	7.4	216.0
31656	BRONCHOSCOPY,INJECT FOR XRAY		112.2	96.1	17.2	225.5
32000	DRAINAGE OF CHEST		97.8	26.8	3.5	128.1
32005	TREAT LUNG LINING CHEMICALLY		67.0	35.8	8.6	111.4
32020	TREATMENT OF COLLAPSED LUNG		108.3	75.6	19.4	203.3
32035	EXPLORATION OF CHEST		297.2	199.5	57.7	554.4
32036	EXPLORATION OF CHEST		302.6	199.9	59.5	562.0
32095	BIOPSY THROUGH CHEST WALL		305.6	245.6	66.7	617.9
32100	EXPLORATION/BIOPSY OF CHEST		469.5	338.2	99.2	906.9
32110	EXPLORE/REPAIR CHEST		452.3	313.7	89.0	855.0
32120	RE-EXPLORATION OF CHEST		424.8	276.9	84.8	786.5
32140	REMOVAL OF LUNG LESION(S)		630.9	390.8	115.8	1137.5
32141	REMOVE/TREAT LUNG LESIONS		578.1	403.4	119.3	1100.8
32150	REMOVAL OF LUNG LESION(S)		451.7	234.2	56.9	742.8
32160	OPEN CHEST HEART MASSAGE		391.9	260.0	62.4	714.3
32220	RELEASE OF LUNG		671.3	446.7	135.1	1253.1
32310	REMOVAL OF CHEST LINING		528.6	338.1	102.3	969.0
32320	FREE/REMOVE CHEST LINING		683.1	535.3	162.2	1380.6
32400	NEEDLE BIOPSY CHEST LINING		48.3	44.9	5.6	98.8
32402	OPEN BIOPSY CHEST LINING		259.5	198.4	59.0	516.9
32440	REMOVAL OF LUNG		724.7	627.8	188.3	1540.8
32480	PARTIAL REMOVAL OF LUNG		671.9	579.2	174.4	1425.5
32485	PARTIAL REMOVAL OF LUNG		799.2	619.3	190.0	1608.5
32490	PARTIAL REMOVAL OF LUNG		776.3	650.3	196.6	1623.2
32500	PARTIAL REMOVAL OF LUNG		529.2	430.0	129.7	1088.9
32520	REMOVE LUNG & REVISE CHEST		760.0	629.0	189.0	1578.0
33010	DRAINAGE OF HEART SAC		136.7	48.4	7.2	192.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
33011	REPEAT DRAINAGE OF HEART SAC		108.6	33.4	6.0	148.0
33015	INCISION OF HEART SAC		355.1	123.1	33.9	512.1
33206	INSERTION OF HEART PACEMAKER		185.6	379.2	101.4	666.2
33207	INSERTION OF HEART PACEMAKER		194.0	398.7	107.6	700.3
33208	INSERTION OF HEART PACEMAKER		245.9	490.2	132.9	869.0
33210	INSERTION OF HEART ELECTRODE		54.0	136.9	16.3	207.2
33212	INSERTION OF PULSE GENERATOR		111.6	205.5	58.0	375.1
33216	REVISION IMPLANTED ELECTRODE		102.0	191.1	47.3	340.4
33218	REPAIR PACEMAKER ELECTRODES		89.0	151.7	42.2	282.9
33219	REPAIR OF PACEMAKER		104.4	209.6	58.4	372.4
33232	REMOVAL OF PACEMAKER		84.2	123.6	35.7	243.5
33405	REPLACEMENT OF AORTIC VALVE		889.2	933.6	297.0	2119.8
33510	CORONARY ARTERY BYPASS		682.8	907.6	287.6	1878.0
33511	CORONARY ARTERIES BYPASS		832.4	1215.5	385.3	2433.2
33512	CORONARY ARTERIES BYPASS		898.5	1352.1	428.4	2679.0
33513	CORONARY ARTERIES BYPASS		973.6	1443.1	457.7	2874.4
33514	CORONARY ARTERIES BYPASS		1007.4	1495.5	476.5	2979.4
33641	REPAIR HEART SEPTUM DEFECT		704.2	652.4	189.2	1545.8
33681	REPAIR HEART SEPTUM DEFECT		775.1	665.3	209.6	1650.0
33682	REPAIR HEART SEPTUM DEFECT		850.5	748.3	237.9	1836.7
35001	REPAIR DEFECT OF ARTERY		566.9	535.5	149.4	1251.8
35011	REPAIR DEFECT OF ARTERY		504.5	468.5	125.1	1098.1
35081	REPAIR DEFECT OF ARTERY		803.2	831.4	233.0	1867.6
35082	REPAIR ARTERY RUPTURE, AORTA		878.6	970.0	267.9	2116.5
35091	REPAIR DEFECT OF ARTERY		912.7	876.8	242.1	2031.6
35092	REPAIR ARTERY RUPTURE, BELLY		968.2	978.3	271.2	2217.7
35102	REPAIR DEFECT OF ARTERY		874.1	860.5	238.0	1972.6
35103	REPAIR ARTERY RUPTURE, GROIN		935.9	1035.3	278.1	2249.3
35121	REPAIR DEFECT OF ARTERY		685.8	611.5	168.0	1465.3
35131	REPAIR DEFECT OF ARTERY		655.0	489.7	136.9	1281.6
35141	REPAIR DEFECT OF ARTERY		560.6	509.2	142.9	1212.7
35142	REPAIR ARTERY RUPTURE, THIGH		617.3	594.8	165.9	1378.0
35151	REPAIR DEFECT OF ARTERY		608.0	538.4	149.0	1295.4
35161	REPAIR DEFECT OF ARTERY		423.0	439.7	118.4	981.1
35301	RECHANNELING OF ARTERY		458.3	594.9	165.5	1218.7
35311	RECHANNELING OF ARTERY		631.2	650.8	185.7	1467.7
35321	RECHANNELING OF ARTERY		370.2	431.8	112.9	914.9
35331	RECHANNELING OF ARTERY		527.1	433.9	124.0	1085.0
35341	RECHANNELING OF ARTERY		502.7	493.3	137.8	1133.8
35351,	RECHANNELING OF ARTERY		442.6	507.6	138.8	1089.0
35361	RECHANNELING OF ARTERY		529.8	602.6	168.1	1300.5
35371	RECHANNELING OF ARTERY		377.8	396.9	110.6	885.3
35381	RECHANNELING OF ARTERY		435.4	453.6	125.0	1014.0
39400	VISUALIZATION OF MEDIASTINUM		201.2	159.2	48.3	408.7
42145	REPAIR,PALATE,PHARYNX/UVULA		247.7	425.9	71.5	745.1
42400	BIOPSY OF SALIVARY GLAND		38.1	23.5	4.3	65.9
42405	BIOPSY OF SALIVARY GLAND		70.6	48.3	8.9	127.8
42408	EXCISION OF SALIVARY CYST		100.8	83.9	14.7	199.4
42409	DRAINAGE OF SALIVARY CYST		106.2	80.5	13.4	200.1
42410	EXCISE PAROTID GLAND/LESION		281.8	189.2	39.5	510.5
42415	EXCISE PAROTID GLAND/LESION		499.3	430.6	80.9	1010.8
42420	EXCISE PAROTID GLAND/LESION		606.5	498.0	90.6	1195.1
42425	EXCISE PAROTID GLAND/LESION		591.7	372.7	66.5	1030.9
42426	EXCISE PAROTID GLAND/LESION		919.9	746.2	142.9	1809.0
42440	EXCISION SUBMAXILLARY GLAND		315.6	267.4	48.8	631.8
42450	EXCISION SUBLINGUAL GLAND		195.2	109.7	20.1	325.0
42800	BIOPSY OF THROAT		26.6	22.2	3.7	52.5
42802	BIOPSY OF THROAT		38.4	38.0	6.4	82.8
42804	BIOPSY OF UPPER NOSE/THROAT		40.6	32.4	5.4	78.4
42806	BIOPSY OF UPPER NOSE/THROAT		50.2	40.5	6.7	97.4

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
42808	EXCISE PHARYNX LESION		74.2	76.1	12.9	163.2
42809	REMOVE PHARYNX FOREIGN BODY		21.1	29.1	4.1	54.3
42810	EXCISION OF NECK CYST		116.2	108.8	20.7	245.7
42815	EXCISION OF NECK CYST		224.8	276.3	52.5	553.6
42820	REMOVE TONSILS AND ADENOIDS		111.3	104.4	16.6	232.3
42821	REMOVE TONSILS AND ADENOIDS		122.2	121.2	20.5	263.9
42825	REMOVAL OF TONSILS		110.1	69.1	12.1	191.3
42826	REMOVAL OF TONSILS		124.3	119.9	20.1	264.3
42830	REMOVAL OF ADENOIDS		83.6	56.4	10.3	150.3
42831	REMOVAL OF ADENOIDS		93.5	69.2	11.3	174.0
42835	REMOVAL OF ADENOIDS		69.1	66.4	13.8	149.3
42836	REMOVAL OF ADENOIDS		98.7	59.7	9.9	168.3
42842	EXTENSIVE SURGERY OF THROAT		145.7	212.6	36.1	394.4
42860	EXCISION OF TONSIL TAGS		64.6	54.1	8.9	127.6
42870	EXCISION OF LINGUAL TONSIL		108.0	75.7	12.4	196.1
42880	EXCISE NOSE/THROAT LESION		121.9	141.2	23.9	287.0
42890	PARTIAL REMOVAL OF PHARYNX		319.2	287.5	49.0	655.7
43110	PARTIAL REMOVAL OF ESOPHAGUS		972.7	692.4	195.8	1860.9
43120	REMOVE ESOPHAGUS & STOMACH		1040.9	733.5	202.7	1977.1
43130	REMOVAL OF ESOPHAGUS POUCH		510.2	350.4	78.9	939.5
44100	BIOPSY OF BOWEL		54.0	41.8	6.2	102.0
44110	EXCISION OF BOWEL LESION(S)		315.6	263.4	67.1	646.1
44111	EXCISION OF BOWEL LESION(S)		411.8	341.9	85.2	838.9
44120	REMOVAL OF SMALL INTESTINE		443.5	376.0	96.2	915.7
44125	REMOVAL OF SMALL INTESTINE		503.3	402.0	102.5	1007.8
44130	BOWEL TO BOWEL FUSION		413.7	322.9	82.8	819.4
44140	PARTIAL REMOVAL OF COLON		492.1	468.9	119.7	1080.7
44141	PARTIAL REMOVAL OF COLON		523.5	496.4	126.6	1146.5
44143	PARTIAL REMOVAL OF COLON		568.7	498.8	127.5	1195.0
44144	PARTIAL REMOVAL OF COLON		541.6	503.6	128.5	1173.7
44145	PARTIAL REMOVAL OF COLON		585.9	565.0	144.4	1295.3
44146	PARTIAL REMOVAL OF COLON		639.9	642.3	162.8	1445.0
44150	REMOVAL OF COLON		626.7	626.5	160.2	1413.4
44155	REMOVAL OF COLON		700.9	675.9	172.9	1549.7
44160	REMOVAL OF COLON		519.9	524.5	134.3	1178.7
44950	APPENDECTOMY		187.4	202.0	50.7	440.1
44955	APPENDECTOMY		90.5	86.7	22.0	199.2
44960	APPENDECTOMY		229.6	263.8	66.7	560.1
45300	PROCTOSIGMOIDOSCOPY		32.1	17.6	2.4	52.1
45302	PROCTOSIGMOIDOSCOPY		63.1	15.5	2.0	80.6
45303	PROCTOSIGMOIDOSCOPY		43.1	20.2	3.5	66.8
45305	PROCTOSIGMOIDOSCOPY; BIOPSY		62.8	28.8	5.9	97.5
45310	PROCTOSIGMOIDOSCOPY		82.1	37.8	8.2	128.1
45315	PROCTOSIGMOIDOSCOPY		94.4	40.3	9.4	144.1
45317	PROCTOSIGMOIDOSCOPY		87.8	43.1	8.3	139.2
45321	PROCTOSIGMOIDOSCOPY		120.1	50.4	11.3	181.8
45330	SIGMOIDOSCOPY		69.1	54.1	6.2	129.4
45331	SIGMOIDOSCOPY AND BIOPSY		95.6	80.6	10.2	186.4
45333	SIGMOIDOSCOPY & POLYPECTOMY		130.9	144.0	23.5	298.4
45334	SIGMOIDOSCOPY FOR BLEEDING		184.7	105.8	13.9	304.4
45336	SIGMOIDOSCOPY,LESION REMOVAL		209.1	108.0	15.6	332.7
45355	SURGICAL COLONOSCOPY		28.8	34.2	4.0	67.0
45360	DIAGNOSTIC COLONOSCOPY		49.9	71.4	8.6	129.9
45365	DIAGNOSTIC COLONOSCOPY		79.4	111.5	13.5	204.4
45367	DIAGNOSTIC COLONOSCOPY		121.9	156.7	32.8	311.4
45368	DIAGNOSTIC COLONOSCOPY		131.2	168.0	16.2	315.4
45369	DIAGNOSTIC COLONOSCOPY		124.0	173.5	25.5	323.0
45370	DIAGNOSTIC COLONOSCOPY		122.5	170.8	30.1	323.4
45372	DIAGNOSTIC COLONOSCOPY		98.7	147.0	30.0	275.7
45378	DIAGNOSTIC COLONOSCOPY		108.3	172.7	24.3	305.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
45379	COLONOSCOPY		130.0	184.3	22.9	337.2
45380	COLONOSCOPY AND BIOPSY		120.1	192.1	24.2	336.4
45382	COLONOSCOPY,CONTROL BLEEDING		142.7	234.0	22.6	399.3
45383	COLONOSCOPY, LESION REMOVAL		147.2	205.4	30.2	382.8
45385	COLONOSCOPY, LESION REMOVAL		156.3	265.5	34.5	456.3
46000	INCISION OF ANAL FISTULA		99.0	52.8	10.1	161.9
46040	INCISION OF RECTAL ABSCESS		90.2	58.8	13.8	162.8
46045	INCISION OF RECTAL ABSCESS		106.2	66.4	16.3	188.9
46050	INCISION OF ANAL ABSCESS		37.0	23.1	5.0	65.1
46060	INCISION OF RECTAL ABSCESS		241.4	181.5	45.0	467.9
46080	INCISION OF ANAL SPHINCTER		108.0	60.5	15.2	183.7
46083	INCISE EXTERNAL HEMORRHOID		23.9	19.1	3.0	46.0
47600	REMOVAL OF GALLBLADDER		299.0	308.6	78.0	685.6
47605	REMOVAL OF GALLBLADDER		319.2	364.0	92.7	775.9
47610	REMOVAL OF GALLBLADDER		380.2	409.0	104.1	893.3
47620	REMOVAL OF GALLBLADDER		442.3	513.3	131.0	1086.6
47630	REMOVE BILE DUCT STONE		169.9	114.7	18.4	303.0
47700	EXPLORATION OF BILE DUCTS		300.8	264.7	66.0	631.5
49500	REPAIR INGUINAL HERNIA		147.2	202.6	48.6	398.4
49505	REPAIR INGUINAL HERNIA		143.6	210.2	52.4	406.2
49510	REPAIR HERNIA, REMOVE TESTIS		158.1	239.2	56.7	454.0
49515	REPAIR INGUINAL HERNIA		157.5	233.8	54.1	445.4
49520	REREPAIR INGUINAL HERNIA		163.5	243.4	61.3	468.2
49525	REPAIR INGUINAL HERNIA		168.1	245.6	61.7	475.4
49530	REPAIR INCARCERATED HERNIA		166.8	232.6	58.6	458.0
49535	REPAIR STRANGULATED HERNIA		174.7	220.8	55.6	451.1
49540	REPAIR LUMBAR HERNIA		157.2	239.8	58.5	455.5
49550	REPAIR FEMORAL HERNIA		149.7	199.4	50.7	399.8
49552	REPAIR FEMORAL HERNIA		173.5	205.2	52.4	431.1
49555	REPAIR FEMORAL HERNIA		167.2	229.5	57.6	454.3
49560	REPAIR ABDOMINAL HERNIA		175.9	247.6	62.7	486.2
49565	REREPAIR ABDOMINAL HERNIA		197.6	284.1	72.1	553.8
49570	REPAIR EPIGASTRIC HERNIA		115.3	158.2	39.7	313.2
49575	REPAIR EPIGASTRIC HERNIA		155.7	203.0	51.6	410.3
49580	REPAIR UMBILICAL HERNIA		119.5	164.8	41.1	325.4
49581	REPAIR UMBILICAL HERNIA		134.0	174.1	43.8	351.9
49590	REPAIR ABDOMINAL HERNIA		149.4	215.6	54.7	419.7
50010	EXPLORATION OF KIDNEY		406.1	304.5	47.6	758.2
50020	DRAINAGE OF KIDNEY ABSCESS		270.0	217.3	36.7	524.0
50040	DRAINAGE OF KIDNEY		324.0	241.6	30.7	596.3
50060	REMOVAL OF KIDNEY STONE		602.2	474.2	63.7	1140.1
50075	REMOVAL OF KIDNEY STONE		721.7	615.4	85.8	1422.9
50080	REMOVAL OF KIDNEY STONE		562.4	437.3	59.2	1058.9
50081	REMOVAL OF KIDNEY STONE		591.7	518.2	71.0	1180.9
50130	REMOVAL OF KIDNEY STONE		474.0	441.2	59.8	975.0
50135	EXPLORATION OF KIDNEY		608.3	595.8	83.4	1287.5
50590	FRAGMENTING OF KIDNEY STONE		380.5	405.5	56.1	842.1
51500	REMOVAL OF BLADDER CYST		274.0	226.3	42.0	542.3
51520	REMOVAL OF BLADDER LESION		319.2	281.5	44.0	644.7
51525	REMOVAL OF BLADDER LESION		474.9	350.0	49.8	874.7
51530	REMOVAL OF BLADDER LESION		379.0	314.9	48.5	742.4
51550	PARTIAL REMOVAL OF BLADDER		459.2	372.8	58.4	890.4
51555	PARTIAL REMOVAL OF BLADDER		535.6	443.5	66.2	1045.3
51565	REVISE BLADDER & URETER(S)		692.4	533.3	77.7	1303.4
51570	REMOVAL OF BLADDER		703.0	540.7	78.2	1321.9
51575	REMOVAL OF BLADDER & NODES		842.4	749.9	107.5	1699.8
51590	REMOVE BLADDER; REVISE TRACT		1017.1	915.9	136.4	2069.4
51595	REMOVE BLADDER; REVISE TRACT		1123.0	1235.7	176.6	2535.3
51597	REMOVAL OF PELVIC STRUCTURES		1050.9	1065.8	196.3	2313.0
51725	SIMPLE CYSTOMETROGRAM		45.8	22.6	3.2	71.6

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
51726	COMPLEX CYSTOMETROGRAM		51.3	29.6	4.2	85.1
51736	URINE FLOW MEASUREMENT		20.3	10.2	1.4	31.9
51741	ELECTRO-UROFLOWMETRY, FIRST		25.2	14.4	2.0	41.6
51772	URETHRA PRESSURE PROFILE		61.6	21.1	3.1	85.8
51785	ANAL/URINARY MUSCLE STUDY		46.1	22.9	3.2	72.2
51795	URINE VOIDING PRESSURE STUDY		45.8	18.7	2.7	67.2
51797	INTRAABDOMINAL PRESSURE TEST		43.9	17.3	2.5	63.7
52000	CYSTOSCOPY		67.9	47.4	6.6	121.9
52005	CYSTOSCOPY & URETER CATHETER		117.7	74.5	10.4	202.6
52007	CYSTOSCOPY AND BIOPSY		149.7	92.9	12.9	255.5
52010	CYSTOSCOPY & DUCT CATHETER		109.5	52.6	7.3	169.4
52204	CYSTOSCOPY		93.2	82.5	11.5	187.2
52214	CYSTOSCOPY AND TREATMENT		112.8	93.3	13.0	219.1
52224	CYSTOSCOPY AND TREATMENT		122.2	97.4	13.5	233.1
52234	CYSTOSCOPY AND TREATMENT		248.0	161.1	22.3	431.4
52235	CYSTOSCOPY AND TREATMENT		282.4	284.5	39.4	606.3
52240	CYSTOSCOPY AND TREATMENT		380.2	371.1	51.3	802.6
52250	CYSTOSCOPY & RADIOTRACER		107.1	103.0	14.5	224.6
52260	CYSTOSCOPY & TREATMENT		87.8	70.5	10.1	168.4
52265	CYSTOSCOPY & TREATMENT		43.1	45.0	6.2	94.3
52270	CYSTOSCOPY & REVISE URETHRA		126.4	121.6	16.9	264.9
52275	CYSTOSCOPY & REVISE URETHRA		143.0	114.5	15.9	273.4
52276	OPTICAL INTERNAL URETHROTOMY		175.3	160.6	22.3	358.2
52281	CYSTOSCOPY AND TREATMENT		83.6	79.4	11.1	174.1
52283	CYSTOSCOPY AND TREATMENT		85.7	42.6	5.9	134.2
52285	CYSTOSCOPY AND TREATMENT		105.9	98.6	13.9	218.4
52290	CYSTOSCOPY AND TREATMENT		97.2	74.7	10.9	182.8
52300	CYSTOSCOPY AND TREATMENT		159.9	114.8	16.1	290.8
52305	CYSTOSCOPY AND TREATMENT		191.0	117.3	16.3	324.6
52310	CYSTOSCOPY AND TREATMENT		113.1	101.5	14.1	228.7
52315	CYSTOSCOPY AND TREATMENT		188.6	139.6	19.4	347.6
52317	REMOVE BLADDER STONE		249.8	196.2	27.2	473.2
52318	REMOVE BLADDER STONE		333.1	252.1	34.9	620.1
52320	CYSTOSCOPY AND TREATMENT		206.4	177.5	24.8	408.7
52325	CYSTOSCOPY, STONE REMOVAL		298.7	215.5	29.7	543.9
52330	CYSTOSCOPY AND TREATMENT		152.7	120.0	16.7	289.4
52332	CYSTOSCOPY AND TREATMENT		142.7	104.9	14.5	262.1
52334	CREATE PASSAGE TO KIDNEY		169.0	125.8	17.4	312.2
52335	ENDOSCOPY OF URINARY TRACT		214.8	180.5	25.1	420.4
52336	CYSTOSCOPY, STONE REMOVAL		413.4	355.0	49.1	817.5
52337	CYSTOSCOPY, STONE REMOVAL		506.0	259.0	35.9	800.9
52338	CYSTOSCOPY AND TREATMENT		280.0	200.6	27.8	508.4
52340	CYSTOSCOPY AND TREATMENT		202.5	155.5	21.6	379.6
52500	REVISION OF BLADDER NECK		299.6	275.4	38.1	613.1
52601	PROSTATECTOMY (TUR)		418.8	502.3	69.5	990.6
52606	CONTROL POSTOP BLEEDING		215.4	100.2	14.0	329.6
52612	PROSTATECTOMY, FIRST STAGE		412.4	424.3	59.2	895.9
52614	PROSTATECTOMY, SECOND STAGE		275.5	254.5	35.3	565.3
52620	REMOVE RESIDUAL PROSTATE		236.5	175.5	24.3	436.3
52630	REMOVE PROSTATE REGROWTH		375.6	462.1	64.4	902.1
52640	RELIEVE BLADDER CONTRACTURE		222.1	262.6	36.4	521.1
52650	PROSTATECTOMY		338.2	400.5	52.1	790.8
54300	REVISION OF PENIS		184.0	86.9	13.2	284.1
54304	REVISION OF PENIS		300.2	276.6	37.6	614.4
54322	RECONSTRUCTION OF URETHRA		337.6	323.5	44.6	705.7
54332	REVISE PENIS, URETHRA		356.9	593.8	81.9	1032.6
54400	INSERT SEMI-RIGID PROSTHESIS		357.2	482.9	66.9	907.0
54402	REMOVE PENIS PROSTHESIS		226.6	195.7	27.3	449.6
54405	INSERT MULTI-COMP PROSTHESIS		558.2	769.0	106.5	1433.7
54407	REMOVE MULTI-COMP PROSTHESIS		274.0	309.7	43.0	626.7

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
54409	REVISE PENIS PROSTHESIS		259.5	301.2	41.5	602.2
55250	REMOVAL OF SPERM DUCT(S)		138.2	81.6	11.8	231.6
57450	PELVIS ENDOSCOPY VIA VAGINA		45.0	29.7	5.5	80.2
57451	PELVIS ENDOSCOPY & BIOPSY		92.6	41.9	10.9	145.4
57452	EXAMINATION OF VAGINA		33.7	18.8	4.9	57.4
57454	VAGINA EXAMINATION & BIOPSY		52.1	37.3	10.5	99.9
58100	BIOPSY OF UTERUS LINING		18.4	20.8	5.6	44.8
58101	WASH SAMPLE OF UTERUS LINING		16.5	12.2	2.5	31.2
58102	CURETTAGE OF UTERUS LINING		25.2	31.3	8.5	65.0
58103	MENSTRUAL EXTRACTION		31.5	32.2	8.5	72.2
58120	DILATION AND CURETTAGE		90.2	101.6	27.8	219.6
58140	REMOVAL OF UTERUS LESION		292.4	213.5	55.7	561.6
58145	REMOVAL OF UTERUS LESION		217.2	223.6	58.5	499.3
58150	TOTAL HYSTERECTOMY		296.6	383.1	107.9	787.6
58152	TOTAL HYSTERECTOMY		347.9	487.3	134.9	970.1
58180	PARTIAL HYSTERECTOMY		309.9	321.6	87.5	719.0
58200	EXTENSIVE HYSTERECTOMY		350.3	475.6	135.3	961.2
58205	EXTENSIVE HYSTERECTOMY		490.0	602.8	177.3	1270.1
58260	VAGINAL HYSTERECTOMY		266.1	377.8	107.9	751.8
58265	HYSTERECTOMY & VAGINA REPAIR		307.8	411.8	117.9	837.5
58267	HYSTERECTOMY & VAGINA REPAIR		296.6	450.8	122.7	870.1
58270	HYSTERECTOMY & VAGINA REPAIR		310.8	412.8	118.1	841.7
58275	HYSTERECTOMY, REVISE VAGINA		317.4	437.9	126.6	881.9
58280	HYSTERECTOMY, REVISE VAGINA		319.2	428.7	120.7	868.6
58285	EXTENSIVE HYSTERECTOMY		349.7	502.4	146.1	998.2
58900	BIOPSY OF OVARY(S)		161.1	156.2	41.1	358.4
58920	PARTIAL REMOVAL OF OVARY(S)		177.1	220.1	59.7	456.9
58925	REMOVAL OF OVARIAN CYST(S)		200.3	209.2	54.6	464.1
58940	REMOVAL OF OVARY(S)		175.0	194.0	50.6	419.6
58945	REMOVAL OF OVARY(S)		245.3	230.8	65.2	541.3
58980	LAPAROSCOPY OF PELVIS		123.4	148.2	41.6	313.2
58982	LAPAROSCOPY; TUBAL CAUTERY		123.4	198.9	56.4	378.7
58983	LAPAROSCOPY; TUBAL BLOCK		123.4	206.6	60.3	390.3
58984	LAPAROSCOPY OF PELVIS		152.7	153.3	42.8	348.8
58985	LAPAROSCOPY OF PELVIS		153.6	155.9	43.3	352.8
58986	PELVIS LAPAROSCOPY & BIOPSY		138.5	159.5	41.8	339.8
58987	LAPAROSCOPY OF PELVIS		145.4	155.6	42.3	343.3
58990	DIAGNOSTIC HYSTEROSCOPY		70.3	58.7	16.8	145.8
59000	AMNIOCENTESIS		96.5	29.0	8.0	133.5
59020	FETAL OXYTOCIN STRESS TEST		29.3	22.0	6.3	57.6
59025	FETAL NON-STRESS TEST		23.0	15.3	4.2	42.5
59050	FETAL MONITOR W/REPORT		38.4	19.2	5.4	63.0
59100	REMOVE UTERUS LESION		398.3	94.0	23.7	516.0
59105	HYSTEROTOMY, ABDOMINAL		189.2	112.3	33.1	334.6
59500	CESAREAN SECTION, LOW CERVICAL		225.4	300.4	85.0	610.8
59501	CESAREAN SECTION, LOW CERVICAL		313.2	375.4	104.4	793.0
59520	CESAREAN SECTION, CLASSIC		225.7	253.5	65.3	544.5
59540	CESAREAN SECTION, EXTRAPERI		263.4	479.3	42.0	784.7
59800	TREATMENT OF ABORTION		79.4	47.1	11.8	138.3
59801	TREATMENT OF ABORTION		107.1	106.2	29.9	243.2
59810	TREATMENT OF ABORTION		124.9	96.6	26.0	247.5
59811	TREATMENT OF ABORTION		115.3	132.7	37.0	285.0
59820	CARE OF MISCARRIAGE		111.6	104.0	29.2	244.8
59830	TREAT UTERUS INFECTION		118.3	69.0	20.3	207.6
59840	ABORTION		102.9	97.9	27.3	228.1
59841	ABORTION		109.2	110.7	30.1	250.0
59850	ABORTION		112.2	135.9	40.1	288.2
59851	ABORTION		114.7	115.1	32.9	262.7
59852	ABORTION		127.6	138.8	41.0	307.4
61526	REMOVAL OF BRAIN LESION		952.2	1062.3	174.8	2189.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
62270	SPINAL FLUID TAP, DIAGNOSTIC		35.7	22.6	2.0	60.3
62272	DRAIN SPINAL FLUID		42.8	28.3	2.7	73.8
62273	TREAT LUMBAR SPINE LESION		64.3	49.3	7.3	120.9
62274	INJECT SPINAL ANESTHETIC		39.2	23.2	3.2	65.6
62276	INJECT SPINAL ANESTHETIC		49.6	42.1	6.9	98.6
62277	INJECT SPINAL ANESTHETIC		42.8	34.7	4.0	81.5
62278	INJECT SPINAL ANESTHETIC		61.9	47.6	7.8	117.3
62279	INJECT SPINAL ANESTHETIC		70.0	35.0	6.9	111.9
62280	TREAT SPINAL CORD LESION		64.3	24.5	2.3	91.1
62282	TREAT SPINAL CANAL LESION		81.5	66.5	11.3	159.3
62284	INJECTION FOR MYELOGRAM		92.3	66.2	8.6	167.1
62288	INJECTION INTO SPINAL CANAL		51.3	51.3	7.2	109.8
62289	INJECTION INTO SPINAL CANAL		63.1	59.8	10.0	132.9
62290	INJECT FOR SPINE DISK X-RAY		108.3	86.0	13.8	208.1
62291	INJECT FOR SPINE DISK X-RAY		91.4	51.4	6.5	149.3
62292	INJECTION INTO DISK LESION		536.5	485.4	83.1	1105.0
62295	LAMINECTOMY, CERVICAL		689.7	518.8	84.0	1292.5
62296	LAMINECTOMY, THORACIC		627.3	775.1	140.5	1542.9
62297	LAMINECTOMY, LUMBAR		525.6	670.4	120.1	1316.1
62301	LAMINECTOMY, CERVICAL		755.8	684.3	109.2	1549.3
62303	LAMINECTOMY, LUMBAR		665.9	484.4	87.8	1238.1
63001	REMOVAL OF SPINAL LAMINA		613.1	705.2	127.8	1446.1
63003	REMOVAL OF SPINAL LAMINA		632.1	697.2	125.7	1455.0
63005	REMOVAL OF SPINAL LAMINA		562.1	738.6	132.4	1433.1
63010	REMOVAL OF SPINAL LAMINA		572.4	654.3	114.5	1341.2
63015	REMOVAL OF SPINAL LAMINA		704.2	821.2	146.3	1671.7
63016	REMOVAL OF SPINAL LAMINA		728.6	828.9	154.0	1711.5
63017	REMOVAL OF SPINAL LAMINA		668.6	931.5	167.3	1767.4
63020	NECK SPINE DISK SURGERY		533.4	687.3	123.8	1344.5
63021	NECK SPINE DISK SURGERY		610.4	811.7	145.0	1567.1
63030	LOW BACK DISK SURGERY		515.6	638.7	115.1	1269.4
63031	LOW BACK DISK SURGERY		589.6	800.9	143.8	1534.3
63035	ADDED SPINAL DISK SURGERY		208.8	174.6	31.2	414.6
63040	NECK SPINE DISK SURGERY		636.9	852.9	148.8	1638.6
63041	THORACIC DISK SURGERY		690.0	898.6	162.9	1751.5
63042	LOW BACK DISK SURGERY		636.3	859.8	154.8	1650.9
63060	NECK SPINE DISK SURGERY		562.4	652.8	118.3	1333.5
63076	NECK SPINE DISK SURGERY		399.5	221.5	41.4	662.4
64702	REVISE FINGER/TOE NERVE		86.3	139.1	26.2	251.6
64704	REVISE HAND/FOOT NERVE		92.3	177.2	33.2	302.7
64708	REVISE ARM/LEG NERVE		132.5	233.3	44.3	410.1
64718	REVISE ULNAR NERVE AT ELBOW		148.7	287.2	53.1	489.0
64719	REVISE ULNAR NERVE AT WRIST		99.6	166.3	31.6	297.5
64721	REVISE MEDIAN NERVE AT WRIST		104.7	230.0	43.6	378.3
64722	RELIEVE PRESSURE ON NERVE(S)		114.0	208.5	38.9	361.4
64727	INTERNAL NERVE REVISION		85.4	110.7	21.3	217.4
65800	DRAINAGE OF EYE		91.7	58.9	5.0	155.6
65805	DRAINAGE OF EYE		98.7	50.7	4.3	153.7
65815	DRAINAGE OF EYE		144.8	131.7	11.3	287.8
65850	INCISION OF EYE		309.0	435.2	36.5	780.7
65855	LASER SURGERY OF EYE		212.4	370.0	31.1	613.5
66850	REMOVAL OF LENS MATERIAL		409.1	478.5	40.2	927.8
66920	EXTRACTION OF LENS		347.3	446.3	37.8	831.4
66940	EXTRACTION OF LENS		410.0	467.8	39.3	917.1
66983	REMOVE CATARACT, INSERT LENS		470.7	739.5	62.3	1272.5
66984	REMOVE CATARACT, INSERT LENS		476.7	750.5	63.0	1290.2
66985	INSERT LENS PROSTHESIS		334.0	469.6	39.4	843.0
67105	REPAIR, DETACHED RETINA		237.1	423.6	35.6	696.3
67107	REPAIR DETACHED RETINA		551.5	742.1	62.3	1355.9
67108	REPAIR DETACHED RETINA		804.1	1229.4	103.2	2136.7

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
67120	REMOVE EYE IMPLANT MATERIAL		197.0	228.4	19.2	444.6
67208	TREATMENT OF RETINAL LESION		231.1	347.5	29.2	607.8
67210	TREATMENT OF RETINAL LESION		207.0	336.4	28.2	571.6
67218	TREATMENT OF RETINAL LESION		300.2	394.3	33.9	728.4
67228	TREATMENT OF RETINAL LESION		207.9	337.1	28.3	573.3
67311	REVISE EYE MUSCLE		268.5	290.3	24.4	583.2
67312	REVISE TWO EYE MUSCLES		291.5	353.4	29.7	674.6
67313	REVISE EYE MUSCLES		337.3	388.0	32.7	758.0
67320	REVISE EYE MUSCLE(S)		353.6	400.0	33.5	787.1
67331	EYE SURGERY FOLLOW-UP		299.0	327.1	27.8	653.9
67332	REREVISE EYE MUSCLES		356.6	363.7	30.5	750.8
67800	REMOVE EYELID LESION		34.8	31.4	2.7	68.9
67801	REMOVE EYELID LESIONS		52.1	45.9	3.9	101.9
67805	REMOVE EYELID LESIONS		62.2	46.8	4.0	113.0
67808	REMOVE EYELID LESION(S)		89.6	66.4	5.7	161.7
67810	BIOPSY OF EYELID		37.9	26.2	2.1	66.2
67820	REVISE EYELASHES		15.9	12.1	1.0	29.0
67825	REVISE EYELASHES		38.9	26.5	2.2	67.6
67830	REVISE EYELASHES		113.1	105.9	8.9	227.9
67840	REMOVE EYELID LESION		161.7	39.1	3.3	204.1
67850	TREAT EYELID LESION		143.3	29.4	2.5	175.2
69200	CLEAR OUTER EAR CANAL		27.4	11.1	1.3	39.8
69210	REMOVE IMPACTED EAR WAX		13.7	6.8	0.8	21.3
69220	CLEAN OUT MASTOID CAVITY		33.7	15.1	2.4	51.2
69221	CLEAN OUT MASTOID CAVITY		30.4	13.7	1.9	46.0
69222	CLEAN OUT MASTOID CAVITY		99.0	27.2	4.7	130.9
69223	CLEAN OUT MASTOID CAVITY		84.5	34.3	6.2	125.0
69420	INCISION OF EARDRUM		35.9	21.0	3.4	60.3
69424	REMOVE VENTILATING TUBE		30.7	20.8	3.3	54.8
69425	REMOVE VENTILATING TUBE		60.9	33.1	5.4	99.4
69433	CREATE EARDRUM OPENING		37.6	40.5	6.7	84.8
69434	CREATE EARDRUM OPENING		70.6	58.8	9.8	139.2
69436	CREATE EARDRUM OPENING		68.2	59.6	9.8	137.6
69437	CREATE EARDRUM OPENING		86.6	90.5	14.9	192.0
69440	EXPLORATION OF MIDDLE EAR		250.7	257.2	42.6	550.5
69601	MASTOID SURGERY REVISION		458.0	489.6	80.4	1028.0
69604	MASTOID SURGERY REVISION		552.7	666.8	110.3	1329.8
69610	REPAIR OF EARDRUM		25.0	27.2	4.3	56.5
69611	REPAIR OF EARDRUM		36.5	28.0	4.7	69.2
69620	REPAIR OF EARDRUM		294.5	315.0	52.2	661.7
69631	REPAIR EARDRUM STRUCTURES		474.3	550.4	91.2	1115.9
69632	REBUILD EARDRUM STRUCTURES		547.6	590.4	98.6	1236.6
69633	REBUILD EARDRUM STRUCTURES		539.5	598.0	99.2	1236.7
69635	REPAIR EARDRUM STRUCTURES		551.2	638.5	106.1	1295.8
69636	REBUILD EARDRUM STRUCTURES		609.8	657.4	109.9	1377.1
69637	REBUILD EARDRUM STRUCTURES		608.6	773.9	126.7	1509.2
69641	REVISE MIDDLE EAR & MASTOID		587.4	651.1	108.0	1346.5
69642	REVISE MIDDLE EAR & MASTOID		637.8	701.2	117.2	1456.2
69643	REVISE MIDDLE EAR & MASTOID		658.6	714.6	119.5	1492.7
69644	REVISE MIDDLE EAR & MASTOID		724.1	801.8	133.5	1659.4
69645	REVISE MIDDLE EAR & MASTOID		655.3	655.6	110.2	1421.1
69646	REVISE MIDDLE EAR & MASTOID		679.8	770.3	128.0	1578.1
69660	REVISE MIDDLE EAR BONE		533.1	560.2	93.1	1186.4
69661	REVISE MIDDLE EAR BONE		562.4	564.6	93.9	1220.9
69667	REPAIR MIDDLE EAR STRUCTURES		481.5	431.8	71.9	985.2
69930	IMPLANT COCHLEAR DEVICE		624.9	886.2	146.5	1657.6
70030 *	X-RAY EYE FOR FOREIGN BODY		17.3	13.6	1.4	32.3

* Work RVUs for radiology in this model fee schedule are based on The Harvard Relative Value Study. However, see text for our plans for the actual fee schedule.

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
70040 *	X-RAY EYE FOR FOREIGN BODY		11.0	15.3	1.9	28.2
70100 *	X-RAY EXAM OF JAW		9.9	14.2	1.6	25.7
70110 *	X-RAY EXAM OF JAW		9.9	18.8	2.1	30.8
70120 *	X-RAY EXAM OF MASTOIDS		11.0	16.3	1.9	29.2
70130 *	X-RAY EXAM OF MASTOIDS		16.2	25.1	3.6	44.9
70134 *	X-RAY EXAM OF MIDDLE EAR		17.3	24.1	3.6	45.0
70140 *	X-RAY EXAM OF FACIAL BONES		8.5	14.1	1.6	24.2
70150 *	X-RAY EXAM OF FACIAL BONES		9.6	18.7	2.0	30.3
70160 *	X-RAY EXAM OF NASAL BONES		7.1	12.8	1.4	21.3
70170 *	X-RAY EXAM OF TEAR DUCT		21.4	18.2	2.1	41.7
70171 *	X-RAY EXAM OF TEAR DUCT		23.0	27.8	3.0	53.8
70190 *	X-RAY EXAM OF EYE SOCKETS		7.7	14.5	1.5	23.7
70200 *	X-RAY EXAM OF EYE SOCKETS		8.2	16.5	1.8	26.5
70210 *	X-RAY EXAM OF SINUSES	PC	5.8	5.6	0.6	12.0
70210 *	X-RAY EXAM OF SINUSES		9.1	12.2	1.7	23.0
70220 *	X-RAY EXAM OF SINUSES	PC	7.4	7.9	0.9	16.2
70220 *	X-RAY EXAM OF SINUSES		13.7	20.7	2.5	36.9
70240 *	X-RAY EXAM PITUITARY SADDLE		7.7	13.8	1.4	22.9
70250 *	X-RAY EXAM OF SKULL	PC	6.9	6.8	0.8	14.5
70250 *	X-RAY EXAM OF SKULL		9.3	16.0	1.7	27.0
70260 *	X-RAY EXAM OF SKULL	PC	8.8	9.1	1.0	18.9
70260 *	X-RAY EXAM OF SKULL		11.5	22.3	2.4	36.2
70300 *	X-RAY EXAM OF TEETH		10.7	4.4	0.6	15.7
70310 *	X-RAY EXAM OF TEETH		9.9	6.6	0.8	17.3
70320 *	FULL MOUTH X-RAY OF TEETH		15.1	13.3	1.7	30.1
70328 *	X-RAY EXAM OF JAW JOINT		21.4	18.1	2.2	41.7
70330 *	X-RAY EXAM OF JAW JOINTS		20.3	21.2	2.6	44.1
70332 *	X-RAY EXAM OF JAW JOINT		25.5	27.2	3.2	55.9
70333 *	X-RAY EXAM OF JAW JOINT		60.3	46.8	5.3	112.4
70350 *	X-RAY HEAD FOR ORTHODONTIA		11.8	13.2	2.0	27.0
70355 *	PANORAMIC X-RAY OF JAWS	PC	7.1	6.0	0.7	13.8
70355 *	PANORAMIC X-RAY OF JAWS		11.8	14.1	2.3	28.2
70360 *	X-RAY EXAM OF NECK		11.2	12.1	1.4	24.7
70370 *	THROAT X-RAY & FLUOROSCOPY		14.5	14.4	1.7	30.6
70380 *	X-RAY EXAM OF SALIVARY GLAND		20.8	15.8	2.0	38.6
70390 *	X-RAY EXAM OF SALIVARY DUCT		25.0	19.8	2.2	47.0
70391 *	X-RAY EXAM OF SALIVARY DUCT		19.7	31.8	3.7	55.2
70450 *	CAT SCAN OF HEAD OR BRAIN	PC	29.9	34.5	3.9	68.3
70450 *	CAT SCAN OF HEAD OR BRAIN		35.7	90.7	10.1	136.5
70460 *	CONTRAST CAT SCAN OF HEAD	PC	32.9	38.1	4.3	75.3
70460 *	CONTRAST CAT SCAN OF HEAD		40.0	105.4	11.7	157.1
70470 *	CONTRAST CAT SCANS OF HEAD	PC	37.0	44.6	5.0	86.6
70470 *	CONTRAST CAT SCANS OF HEAD		46.4	129.7	14.5	190.6
70480 *	CAT SCAN OF SKULL	PC	29.1	32.2	3.6	64.9
70480 *	CAT SCAN OF SKULL		35.1	88.9	10.0	134.0
70481 *	CONTRAST CAT SCAN OF SKULL	PC	33.5	36.3	4.1	73.9
70481 *	CONTRAST CAT SCAN OF SKULL		38.4	96.7	10.8	145.9
70486 *	CAT SCAN OF FACE, JAW	PC	24.1	34.5	3.9	62.5
70486 *	CAT SCAN OF FACE, JAW		26.3	100.0	11.3	137.6
71010 *	X-RAY EXAM OF CHEST		5.8	10.8	1.0	17.6
71015 *	STEREO X-RAY EXAM OF CHEST		8.0	15.4	1.5	24.9
71020 *	X-RAY EXAM OF CHEST	PC	6.6	5.8	0.7	13.1
71020 *	X-RAY EXAM OF CHEST		11.0	15.4	1.5	27.9
71021 *	X-RAY EXAM OF CHEST	PC	5.8	4.5	0.5	10.8
71021 *	X-RAY EXAM OF CHEST		10.4	12.7	1.3	24.4
71022 *	X-RAY EXAM OF CHEST	PC	6.6	6.2	0.7	13.5

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
71022 *	X-RAY EXAM OF CHEST		10.7	17.1	1.7	29.5
71023 *	CHEST X-RAY AND FLUOROSCOPY		9.6	13.8	1.4	24.8
71030 *	X-RAY EXAM OF CHEST	PC	8.2	6.8	0.8	15.8
71030 *	X-RAY EXAM OF CHEST		11.0	18.2	1.9	31.1
71034 *	CHEST X-RAY & FLUOROSCOPY		11.5	16.5	1.6	29.6
71035 *	X-RAY EXAM OF CHEST		8.0	11.5	1.2	20.7
71036 *	X-RAY GUIDANCE FOR BIOPSY		22.2	17.5	1.6	41.3
71038 *	X-RAY GUIDANCE FOR BIOPSY		18.9	25.6	2.7	47.2
71040 *	CONTRAST X-RAY OF BRONCHI		13.2	14.6	1.5	29.3
71041 *	CONTRAST X-RAY OF BRONCHI		14.3	27.5	4.8	46.6
71060 *	CONTRAST X-RAY OF BRONCHI		9.3	12.0	1.2	22.5
71061 *	CONTRAST X-RAY OF BRONCHI		10.7	39.7	5.2	55.6
71090 *	X-RAY & PACEMAKER INSERTION		14.8	17.3	2.3	34.4
71100 *	X-RAY EXAM OF RIBS	PC	6.3	6.2	0.7	13.2
71100 *	X-RAY EXAM OF RIBS		10.7	16.0	1.8	28.5
71101 *	X-RAY EXAM OF RIBS, CHEST	PC	7.1	7.0	0.8	14.9
71101 *	X-RAY EXAM OF RIBS, CHEST		10.7	17.5	1.9	30.1
71110 *	X-RAY EXAM OF RIBS	PC	8.2	8.1	0.9	17.2
71110 *	X-RAY EXAM OF RIBS		12.6	19.4	2.2	34.2
71111 *	X-RAY EXAM OF RIBS, CHEST	PC	9.1	9.3	1.0	19.4
71111 *	X-RAY EXAM OF RIBS, CHEST		13.2	21.9	2.4	37.5
71120 *	X-RAY EXAM OF BREASTBONE		10.7	14.8	1.7	27.2
71130 *	X-RAY EXAM OF BREASTBONE		17.0	16.8	2.2	36.0
71250 *	CAT SCAN OF CHEST	PC	35.1	38.4	4.3	77.8
71250 *	CAT SCAN OF CHEST		46.9	115.1	12.9	174.9
71260 *	CONTRAST CAT SCAN OF CHEST	PC	36.8	42.6	4.8	84.2
71260 *	CONTRAST CAT SCAN OF CHEST		49.6	128.0	14.3	191.9
71270 *	CONTRAST CAT SCANS OF CHEST	PC	41.4	46.6	5.2	93.2
71270 *	CONTRAST CAT SCANS OF CHEST		52.1	130.8	14.7	197.6
72010 *	X-RAY EXAM OF SPINE	PC	14.3	12.0	1.4	27.7
72010 *	X-RAY EXAM OF SPINE		20.3	26.8	3.2	50.3
72020 *	X-RAY EXAM OF SPINE	PC	4.9	4.8	0.5	10.2
72020 *	X-RAY EXAM OF SPINE		9.1	12.3	1.8	23.2
72040 *	X-RAY EXAM OF NECK SPINE	PC	6.9	6.5	0.7	14.1
72040 *	X-RAY EXAM OF NECK SPINE		11.0	18.1	2.3	31.4
72050 *	X-RAY EXAM OF NECK SPINE	PC	8.5	8.7	1.0	18.2
72050 *	X-RAY EXAM OF NECK SPINE		15.1	24.1	2.9	42.1
72052 *	X-RAY EXAM OF NECK SPINE	PC	9.9	9.9	1.1	20.9
72052 *	X-RAY EXAM OF NECK SPINE		16.2	26.6	3.2	46.0
72070 *	X-RAY EXAM OF THORAX SPINE	PC	6.6	6.3	0.7	13.6
72070 *	X-RAY EXAM OF THORAX SPINE		11.5	17.7	2.3	31.5
72072 *	X-RAY EXAM OF THORACIC SPINE	PC	7.1	7.0	0.8	14.9
72072 *	X-RAY EXAM OF THORACIC SPINE		10.1	18.5	2.1	30.7
72074 *	X-RAY EXAM OF THORACIC SPINE	PC	8.2	8.1	0.9	17.2
72074 *	X-RAY EXAM OF THORACIC SPINE		11.5	20.9	2.5	34.9
72080 *	X-RAY EXAM OF TRUNK SPINE	PC	6.9	6.7	0.8	14.4
72080 *	X-RAY EXAM OF TRUNK SPINE		11.5	19.0	2.8	33.3
72090 *	X-RAY EXAM OF TRUNK SPINE		11.5	19.5	3.0	34.0
72100 *	X-RAY EXAM OF LOWER SPINE	PC	7.1	7.1	0.8	15.0
72100 *	X-RAY EXAM OF LOWER SPINE		12.9	20.1	2.7	35.7
72110 *	X-RAY EXAM OF LOWER SPINE	PC	9.9	10.0	1.1	21.0
72110 *	X-RAY EXAM OF LOWER SPINE		17.8	27.5	3.5	48.8
72114 *	X-RAY EXAM OF LOWER SPINE	PC	9.9	10.7	1.2	21.8
72114 *	X-RAY EXAM OF LOWER SPINE		19.5	29.4	4.3	53.2
72120 *	X-RAY EXAM OF LOWER SPINE	PC	9.3	7.3	0.8	17.4
72120 *	X-RAY EXAM OF LOWER SPINE		17.0	21.8	3.2	42.0
72125 *	CAT SCAN OF NECK SPINE	PC	34.8	39.0	4.4	78.2

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
72125 *	CAT SCAN OF NECK SPINE		54.3	116.5	13.1	183.9
72126 *	CONTRAST CAT SCAN OF NECK	PC	39.2	44.4	5.0	88.5
72126 *	CONTRAST CAT SCAN OF NECK		59.8	132.6	14.9	207.3
72127 *	CONTRAST CAT SCANS OF NECK	PC	36.5	52.3	5.9	94.7
72127 *	CONTRAST CAT SCANS OF NECK		57.9	157.7	17.4	233.0
72128 *	CAT SCAN OF THORAX SPINE	PC	35.4	37.6	4.2	77.2
72128 *	CAT SCAN OF THORAX SPINE		45.0	119.7	13.4	178.1
72131 *	CAT SCAN OF LOWER SPINE	PC	34.8	38.6	4.3	77.7
72131 *	CAT SCAN OF LOWER SPINE		57.1	125.8	14.2	197.1
72140 *	MRI, SPINAL CORD		62.5	229.2	25.8	317.5
72170 *	X-RAY EXAM OF PELVIS	PC	5.5	5.0	0.6	11.1
72170 *	X-RAY EXAM OF PELVIS		9.1	14.1	2.1	25.3
72180 *	X-RAY EXAM OF PELVIS	PC	6.0	6.2	0.7	12.9
72180 *	X-RAY EXAM OF PELVIS		10.1	18.1	2.8	31.0
72190 *	X-RAY EXAM OF PELVIS	PC	7.1	6.8	0.8	14.7
72190 *	X-RAY EXAM OF PELVIS		12.1	19.2	2.8	34.1
72192 *	CAT SCAN OF PELVIS	PC	31.8	33.7	3.8	69.3
72192 *	CAT SCAN OF PELVIS		38.4	92.7	10.4	141.5
72193 *	CONTRAST CAT SCAN OF PELVIS	PC	34.6	39.3	4.4	78.5
72193 *	CONTRAST CAT SCAN OF PELVIS		46.1	108.6	12.1	166.8
72194 *	CONTRAST CAT SCANS OF PELVIS	PC	40.6	43.4	4.9	88.9
72194 *	CONTRAST CAT SCANS OF PELVIS		54.6	124.6	14.0	193.2
72200 *	X-RAY EXAM SACROILIAC JOINTS	PC	6.0	5.5	0.6	12.1
72200 *	X-RAY EXAM SACROILIAC JOINTS		12.1	13.5	1.6	27.2
72202 *	X-RAY EXAM SACROILIAC JOINTS	PC	8.0	6.5	0.7	15.2
72202 *	X-RAY EXAM SACROILIAC JOINTS		11.0	17.5	2.0	30.5
72220 *	X-RAY EXAM OF TAILBONE	PC	6.0	5.7	0.6	12.3
72220 *	X-RAY EXAM OF TAILBONE		9.9	15.6	2.0	27.5
72240 *	CONTRAST X-RAY OF NECK SPINE		23.3	27.2	3.0	53.5
72255 *	CONTRAST X-RAY THORAX SPINE		26.9	19.9	2.3	49.1
72265 *	CONTRAST X-RAY LOWER SPINE		24.1	28.7	3.4	56.2
72266 *	CONTRAST X-RAY LOWER SPINE		75.4	93.1	11.1	179.6
72270 *	CONTRAST X-RAY OF SPINE		34.6	29.0	3.4	67.0
72271 *	CONTRAST X-RAY OF SPINE		85.3	122.7	14.6	222.6
72285 *	X-RAY OF NECK SPINE DISK		30.7	28.6	3.2	62.5
72295 *	X-RAY OF LOWER SPINE DISK		19.7	16.9	2.2	38.8
73000 *	X-RAY EXAM OF COLLARBONE	PC	7.4	4.6	0.5	12.5
73000 *	X-RAY EXAM OF COLLARBONE		12.9	12.9	1.9	27.7
73010 *	X-RAY EXAM OF SHOULDER BLADE		10.4	14.5	2.0	26.9
73020 *	X-RAY EXAM OF SHOULDER	PC	6.9	4.7	0.5	12.1
73020 *	X-RAY EXAM OF SHOULDER		13.2	13.7	2.0	28.9
73030 *	X-RAY EXAM OF SHOULDER	PC	8.2	5.6	0.6	14.4
73030 *	X-RAY EXAM OF SHOULDER		15.4	16.1	2.3	33.8
73040 *	CONTRAST X-RAY OF SHOULDER		20.6	19.5	2.4	42.5
73041 *	CONTRAST X-RAY OF SHOULDER		41.1	41.2	5.1	87.4
73050 *	X-RAY EXAM OF SHOULDERS	PC	9.1	6.1	0.7	15.9
73050 *	X-RAY EXAM OF SHOULDERS		12.9	16.9	2.5	32.3
73060 *	X-RAY EXAM OF HUMERUS	PC	7.4	5.0	0.6	13.0
73060 *	X-RAY EXAM OF HUMERUS		12.9	14.5	2.3	29.7
73070 *	X-RAY EXAM OF ELBOW	PC	7.1	4.6	0.5	12.2
73070 *	X-RAY EXAM OF ELBOW		13.2	13.4	2.1	28.7
73080 *	X-RAY EXAM OF ELBOW	PC	8.0	5.2	0.6	13.8
73080 *	X-RAY EXAM OF ELBOW		13.4	14.6	2.1	30.1
73090 *	X-RAY EXAM OF FOREARM	PC	10.7	4.5	0.5	15.7
73090 *	X-RAY EXAM OF FOREARM		17.6	12.9	1.9	32.4
73092 *	X-RAY EXAM OF ARM, INFANT		15.6	14.7	1.9	32.2
73100 *	X-RAY EXAM OF WRIST	PC	10.7	4.4	0.5	15.6

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
73100 *	X-RAY EXAM OF WRIST		20.3	13.2	2.2	35.7
73110 *	X-RAY EXAM OF WRIST	PC	11.5	5.1	0.6	17.2
73110 *	X-RAY EXAM OF WRIST		20.8	14.8	2.2	37.8
73115 *	CONTRAST X-RAY OF WRIST		18.7	13.6	1.9	34.2
73116 *	CONTRAST X-RAY OF WRIST		22.2	17.0	2.4	41.6
73120 *	X-RAY EXAM OF HAND	PC	5.8	4.3	0.5	10.6
73120 *	X-RAY EXAM OF HAND		9.1	12.1	1.5	22.7
73130 *	X-RAY EXAM OF HAND	PC	5.5	5.1	0.6	11.2
73130 *	X-RAY EXAM OF HAND		9.9	14.2	1.9	26.0
73140 *	X-RAY EXAM OF FINGER(S)	PC	4.1	3.8	0.4	8.3
73140 *	X-RAY EXAM OF FINGER(S)		8.0	10.8	1.6	20.4
73500 *	X-RAY EXAM OF HIP	PC	6.0	5.3	0.6	11.9
73500 *	X-RAY EXAM OF HIP		10.1	14.6	2.3	27.0
73510 *	X-RAY EXAM OF HIP	PC	7.7	6.4	0.7	14.8
73510 *	X-RAY EXAM OF HIP		12.9	18.5	2.9	34.3
73520 *	X-RAY EXAM OF HIPS	PC	9.9	7.8	0.9	18.6
73520 *	X-RAY EXAM OF HIPS		15.6	20.9	3.1	39.6
73525 *	CONTRAST X-RAY OF HIP		12.9	20.4	2.8	36.1
73526 *	CONTRAST X-RAY OF HIP		27.4	37.8	5.0	70.2
73530 *	X-RAY EXAM OF HIP		9.1	15.8	2.2	27.1
73540 *	X-RAY EXAM OF PELVIS & HIPS	PC	7.1	6.7	0.7	14.5
73540 *	X-RAY EXAM OF PELVIS & HIPS		11.5	17.6	2.7	31.8
73550 *	X-RAY EXAM OF THIGH	PC	6.3	5.4	0.6	12.3
73550 *	X-RAY EXAM OF THIGH		10.1	16.0	2.5	28.6
73560 *	X-RAY EXAM OF KNEE	PC	5.2	4.8	0.5	10.5
73560 *	X-RAY EXAM OF KNEE		9.9	14.3	2.2	26.4
73562 *	X-RAY EXAM OF KNEE	PC	5.8	5.8	0.7	12.3
73562 *	X-RAY EXAM OF KNEE		10.7	17.1	2.5	30.3
73564 *	X-RAY EXAM OF KNEE	PC	6.3	6.4	0.7	13.4
73564 *	X-RAY EXAM OF KNEE		14.0	18.9	3.0	35.9
73580 *	CONTRAST X-RAY OF KNEE JOINT		13.7	22.2	2.9	38.8
73581 *	CONTRAST X-RAY OF KNEE JOINT		25.0	43.2	5.3	73.5
73590 *	X-RAY EXAM OF LOWER LEG	PC	5.2	4.8	0.5	10.5
73590 *	X-RAY EXAM OF LOWER LEG		8.8	13.9	2.1	24.8
73592 *	X-RAY EXAM OF LEG, INFANT		6.6	13.8	2.1	22.5
73600 *	X-RAY EXAM OF ANKLE	PC	5.2	4.5	0.5	10.2
73600 *	X-RAY EXAM OF ANKLE		9.3	13.2	2.0	24.5
73610 *	X-RAY EXAM OF ANKLE	PC	5.5	5.2	0.6	11.3
73610 *	X-RAY EXAM OF ANKLE		9.9	15.2	2.3	27.4
73615 *	CONTRAST X-RAY OF ANKLE	PC	6.3	6.6	0.7	13.6
73615 *	CONTRAST X-RAY OF ANKLE		8.8	15.3	1.9	26.0
73616 *	CONTRAST X-RAY OF ANKLE		9.3	20.6	3.0	32.9
73620 *	X-RAY EXAM OF FOOT	PC	8.5	4.6	0.5	13.6
73620 *	X-RAY EXAM OF FOOT		15.4	12.8	1.9	30.1
73630 *	X-RAY EXAM OF FOOT	PC	8.2	5.1	0.6	13.9
73630 *	X-RAY EXAM OF FOOT		17.0	14.7	2.1	33.8
73650 *	X-RAY EXAM OF HEEL	PC	7.1	4.4	0.5	12.0
73650 *	X-RAY EXAM OF HEEL		14.0	12.8	1.9	28.7
73660 *	X-RAY EXAM OF TOE(S)	PC	6.3	3.8	0.4	10.5
73660 *	X-RAY EXAM OF TOE(S)		11.8	10.7	1.5	24.0
74000 *	X-RAY EXAM OF ABDOMEN		8.5	11.5	1.3	21.3
74010 *	X-RAY EXAM OF ABDOMEN		9.6	15.2	1.7	26.5
74020 *	X-RAY EXAM OF ABDOMEN	PC	9.6	7.3	0.8	17.7
74020 *	X-RAY EXAM OF ABDOMEN		10.1	16.8	1.7	28.6
74022 *	X-RAY EXAM SERIES, ABDOMEN		13.4	19.3	2.0	34.7
74150 *	CAT SCAN OF ABDOMEN	PC	33.5	38.3	4.3	76.1
74150 *	CAT SCAN OF ABDOMEN		38.9	105.2	11.8	155.9

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
74160 *	CONTRAST CAT SCAN OF ABDOMEN	PC	36.5	42.5	4.8	83.8
74160 *	CONTRAST CAT SCAN OF ABDOMEN		47.5	125.3	14.0	186.8
74170 *	CONTRAST CAT SCANS, ABDOMEN	PC	42.0	48.0	5.4	95.4
74170 *	CONTRAST CAT SCANS, ABDOMEN		57.6	146.9	16.4	220.9
74210 *	CONTRAST XRAY EXAM OF THROAT		11.8	21.7	2.4	35.9
74220 *	CONTRAST XRAY EXAM,ESOPHAGUS		11.8	22.6	2.5	36.9
74230 *	CINEMA XRAY THROAT/ESOPHAGUS		11.0	25.6	2.9	39.5
74235 *	REMOVE ESOPHAGUS OBSTRUCTION		9.9	30.0	3.4	43.3
74240 *	X-RAY EXAM UPPER GI TRACT		16.5	33.5	3.6	53.6
74241 *	X-RAY EXAM UPPER GI TRACT		20.3	35.9	3.9	60.1
74245 *	X-RAY EXAM UPPER GI TRACT		20.6	43.5	4.7	68.8
74246 *	CONTRAST XRAY UPPER GI TRACT		19.2	39.3	4.3	62.8
74247 *	CONTRAST XRAY UPPER GI TRACT		24.4	44.4	4.9	73.7
74249 *	CONTRAST XRAY UPPER GI TRACT		23.3	50.3	5.6	79.2
74250 *	X-RAY EXAM OF SMALL BOWEL		17.6	26.7	2.9	47.2
74260 *	X-RAY EXAM OF SMALL BOWEL		16.2	28.3	3.1	47.6
74270 *	CONTRAST X-RAY EXAM OF COLON		27.7	31.6	3.5	62.8
74280 *	CONTRAST X-RAY EXAM OF COLON		36.8	39.4	4.4	80.6
74400 *	CONTRAST X-RAY URINARY TRACT		26.6	36.0	4.4	67.0
74405 *	CONTRAST X-RAY URINARY TRACT		28.3	42.1	5.0	75.4
74420 *	CONTRAST X-RAY URINARY TRACT		14.5	22.9	2.9	40.3
74425 *	CONTRAST X-RAY URINARY TRACT		17.3	15.7	2.1	35.1
74426 *	CONTRAST X-RAY URINARY TRACT		33.7	37.0	4.9	75.6
74430 *	CONTRAST X-RAY OF BLADDER		14.0	20.1	2.6	36.7
74431 *	CONTRAST X-RAY OF BLADDER		21.4	28.1	3.6	53.1
74440 *	XRAY EXAM MALE GENITAL TRACT		30.4	18.7	2.2	51.3
74450 *	X-RAY EXAM URETHRA/BLADDER		15.6	19.1	2.5	37.2
74451 *	X-RAY EXAM URETHRA/BLADDER		25.2	29.4	3.8	58.4
74455 *	X-RAY EXAM URETHRA/BLADDER		20.6	27.4	3.5	51.5
74456 *	X-RAY EXAM URETHRA/BLADDER		24.4	32.8	4.1	61.3
74470 *	X-RAY EXAM OF KIDNEY LESION		18.4	14.9	1.9	35.2
74471 *	X-RAY EXAM OF KIDNEY LESION		80.1	49.0	5.4	134.5
74475 *	XRAY CONTROL CATHETER INSERT		43.6	16.2	2.2	62.0
74476 *	XRAY CONTROL CATHETER INSERT		110.0	89.7	10.4	210.1
74480 *	XRAY CONTROL CATHETER INSERT		62.8	27.7	3.1	93.6
74481 *	XRAY CONTROL CATHETER INSERT		133.9	122.3	14.1	270.3
74710 *	X-RAY MEASUREMENT OF PELVIS		28.3	11.8	1.5	41.6
74720 *	X-RAY ABDOMEN		24.7	15.4	1.7	41.8
74741 *	X-RAY FEMALE GENITAL TRACT		37.0	41.4	6.2	84.6
75650 *	ARTERY X-RAYS, HEAD & NECK		61.2	27.2	3.1	91.5
75651 *	ARTERY X-RAYS, HEAD & NECK		144.8	222.1	24.9	391.8
75652 *	ARTERY X-RAYS, HEAD & NECK		48.0	49.6	8.9	106.5
75653 *	ARTERY X-RAYS, HEAD & NECK		117.7	135.1	15.4	268.2
75654 *	ARTERY X-RAYS, HEAD & NECK		76.5	62.2	7.3	146.0
75655 *	ARTERY X-RAYS, HEAD & NECK		181.6	204.6	23.5	409.7
75656 *	ARTERY X-RAYS, HEAD & NECK		106.4	60.2	6.9	173.5
75657 *	ARTERY X-RAYS, HEAD & NECK		189.5	157.7	18.0	365.2
75658 *	X-RAY EXAM OF ARM ARTERIES		54.6	49.2	7.8	111.6
75659 *	X-RAY EXAM OF ARM ARTERIES		116.0	54.8	6.4	177.2
75660 *	ARTERY X-RAYS, HEAD & NECK		49.1	61.5	7.2	117.8
75661 *	ARTERY X-RAYS, HEAD & NECK		117.4	78.2	9.4	205.0
75662 *	ARTERY X-RAYS, HEAD & NECK		56.2	18.7	2.2	77.1
75663 *	ARTERY X-RAYS, HEAD & NECK		158.0	119.8	20.7	298.5
75665 *	ARTERY X-RAYS, HEAD & NECK		46.9	30.3	5.2	82.4
75667 *	ARTERY X-RAYS, HEAD & NECK		114.1	98.3	11.0	223.4
75669 *	ARTERY X-RAYS, HEAD & NECK		122.6	170.7	20.7	314.0
75671 *	ARTERY X-RAYS, HEAD & NECK		65.6	55.4	6.4	127.4

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
75672 *	ARTERY X-RAYS, HEAD & NECK		143.7	136.8	13.8	294.3
75673 *	ARTERY X-RAYS, HEAD & NECK		182.4	233.4	28.9	444.7
75676 *	ARTERY X-RAYS, NECK		77.6	40.4	4.9	122.9
75677 *	ARTERY X-RAYS, NECK		78.7	65.5	10.6	154.8
75678 *	ARTERY X-RAYS, NECK		135.2	152.3	17.5	305.0
75680 *	ARTERY X-RAYS, NECK		62.5	111.1	12.4	186.0
75681 *	ARTERY X-RAYS, NECK		137.4	124.8	14.0	276.2
75682 *	ARTERY X-RAYS, NECK		176.9	205.1	23.1	405.1
75685 *	ARTERY X-RAYS, SPINE		56.0	29.8	3.3	89.1
75687 *	ARTERY X-RAYS, SPINE		128.6	84.7	9.5	222.8
75690 *	ARTERY X-RAYS, NECK SPINE		75.4	33.9	3.8	113.1
75692 *	ARTERY X-RAYS, NECK SPINE		110.0	86.2	9.0	205.2
75695 *	ARTERY X-RAYS, NECK SPINE		61.7	64.5	7.2	133.4
75697 *	ARTERY X-RAYS, NECK SPINE		151.7	113.8	12.8	278.3
75705 *	ARTERY X-RAYS, SPINE		32.1	40.3	4.6	77.0
75710 *	ARTERY X-RAYS, ARM/LEG		37.9	36.0	6.3	80.2
75711 *	ARTERY X-RAYS, ARM/LEG		100.4	72.2	10.9	183.5
75712 *	ARTERY X-RAYS, ARM/LEG		110.3	121.9	16.1	248.3
75716 *	ARTERY X-RAYS, ARMS/LEGS		60.6	40.8	7.5	108.9
75717 *	ARTERY X-RAYS, ARMS/LEGS		133.9	85.2	10.2	229.3
75718 *	ARTERY X-RAYS, ARMS/LEGS		141.5	107.1	12.3	260.9
75722 *	ARTERY X-RAYS, KIDNEY		63.4	43.3	6.3	113.0
75723 *	ARTERY X-RAYS, KIDNEY		152.0	134.2	15.0	301.2
75724 *	ARTERY X-RAYS, KIDNEYS		60.9	39.3	4.4	104.6
75725 *	ARTERY X-RAYS, KIDNEYS		176.4	149.1	16.7	342.2
75726 *	ARTERY X-RAYS, ABDOMEN		59.2	35.2	4.1	98.5
75727 *	ARTERY X-RAYS, ABDOMEN		158.5	153.6	17.1	329.2
75728 *	ARTERY X-RAYS, ABDOMEN		161.8	118.2	13.3	293.3
75736 *	ARTERY X-RAYS, PELVIS		57.9	28.3	3.1	89.3
75737 *	ARTERY X-RAYS, PELVIS		116.8	92.9	12.1	221.8
75741 *	ARTERY X-RAYS, LUNG		40.3	25.9	2.7	68.9
75742 *	ARTERY X-RAYS, LUNG		142.4	103.6	12.7	258.7
75743 *	ARTERY X-RAYS, LUNGS		53.2	41.9	4.6	99.7
75744 *	ARTERY X-RAYS, LUNGS		172.3	161.9	17.4	351.6
75746 *	ARTERY X-RAYS, LUNG		45.5	12.9	1.6	60.0
75747 *	ARTERY X-RAYS, LUNG		110.8	124.7	14.0	249.5
75750 *	ARTERY X-RAYS, HEART		61.7	36.1	3.6	101.4
75751 *	ARTERY X-RAYS, HEART		48.0	37.7	3.2	88.9
75752 *	ARTERY X-RAYS, HEART		48.3	36.5	4.3	89.1
75753 *	ARTERY X-RAYS, HEART		119.0	70.9	6.2	196.1
75754 *	ARTERY X-RAYS, HEART		74.3	43.0	4.7	122.0
75755 *	ARTERY X-RAYS, HEART		150.3	99.1	10.4	259.8
75757 *	ARTERY X-RAYS, CHEST		60.1	34.9	4.2	99.2
75762 *	CORONARY BYPASS X-RAY		75.7	34.2	3.6	113.5
75764 *	CORONARY BYPASS X-RAY		57.1	52.1	6.1	115.3
75766 *	CORONARY BYPASS X-RAY		90.5	31.8	3.1	125.4
75767 *	CORONARY BYPASS X-RAY		103.7	160.8	13.3	277.8
75772 *	CORONARY BYPASS X-RAY		46.6	17.4	2.9	66.9
75774 *	ARTERY X-RAY, EACH VESSEL		34.6	16.6	1.9	53.1
75775 *	ARTERY X-RAY, EACH VESSEL		55.1	39.1	4.7	98.9
75790 *	VISUALIZE A-V SHUNT		66.7	94.4	20.5	181.6
75820 *	VEIN X-RAY, ARM/LEG		22.2	31.7	3.6	57.5
75821 *	VEIN X-RAY, ARM/LEG		42.5	53.7	6.0	102.2
75822 *	VEIN X-RAY, ARMS/LEGS		24.7	46.0	5.2	75.9
75823 *	VEIN X-RAY, ARMS/LEGS		51.3	71.0	7.7	130.0
75825 *	VEIN X-RAY, TRUNK		34.3	25.9	2.8	63.0
75826 *	VEIN X-RAY, TRUNK		79.5	88.9	9.7	178.1

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
75827 *	VEIN X-RAY, CHEST		35.4	31.9	3.6	70.9
75828 *	VEIN X-RAY, CHEST		76.8	77.3	8.7	162.8
75832 *	VEIN X-RAY, KIDNEY		75.7	71.5	8.4	155.6
75834 *	VEIN X-RAYS, KIDNEYS		95.7	99.6	10.7	206.0
76087 *	X-RAY OF MAMMARY DUCT		45.3	40.7	4.7	90.7
76088 *	X-RAY OF MAMMARY DUCTS		29.3	34.1	3.8	67.2
76089 *	X-RAY OF MAMMARY DUCTS		12.6	54.1	5.7	72.4
76090 *	X-RAY EXAM OF BREAST	PC	13.2	8.5	1.0	22.7
76090 *	X-RAY EXAM OF BREAST		22.8	21.7	2.5	47.0
76091 *	X-RAY EXAM OF BREASTS	PC	18.1	11.4	1.3	30.8
76091 *	X-RAY EXAM OF BREASTS		34.0	29.6	3.4	67.0
76355 *	CAT SCAN FOR LOCALIZATION		49.9	62.7	6.3	118.9
76360 *	CAT SCAN FOR NEEDLE BIOPSY		45.0	46.5	5.4	96.9
76361 *	CAT SCAN FOR NEEDLE BIOPSY		82.0	101.2	11.4	194.6
76365 *	CAT SCAN FOR CYST ASPIRATION		35.4	24.6	2.7	62.7
76366 *	CAT SCAN FOR CYST ASPIRATION		74.1	89.3	10.0	173.4
76370 *	CAT SCAN FOR THERAPY GUIDE		37.9	60.7	6.7	105.3
76375 *	CAT SCANS, OTHER PLANES		36.8	40.8	4.6	82.2
76500 *	ECHO EXAM OF HEAD		12.6	16.4	2.1	31.1
76506 *	ECHO EXAM OF HEAD		24.1	53.8	5.7	83.6
76511 *	ECHO EXAM OF EYE		20.0	57.1	4.8	81.9
76512 *	ECHO EXAM OF EYE		26.6	70.7	5.9	103.2
76516 *	ECHO EXAM OF EYE		19.2	65.1	5.5	89.8
76519 *	ECHO EXAM OF EYE		20.3	65.5	5.5	91.3
76529 *	ECHO EXAM OF EYE		15.4	55.4	4.7	75.5
76700 *	ECHO EXAM OF ABDOMEN		40.3	52.6	5.8	98.7
76705 *	ECHO EXAM OF ABDOMEN		29.1	37.8	4.2	71.1
76770 *	ECHO EXAM ABDOMEN BACK WALL		36.2	48.2	5.7	90.1
76775 *	ECHO EXAM ABDOMEN BACK WALL		29.3	38.5	4.6	72.4
76805 *	ECHO EXAM OF PREGNANT UTERUS		45.5	42.1	6.1	93.7
76815 *	ECHO EXAM OF PREGNANT UTERUS		32.1	26.2	5.0	63.3
76825 *	ECHO EXAM OF FETAL HEART		72.1	21.6	3.8	97.5
76855 *	ECHO EXAM OF PELVIS		49.4	43.5	5.7	98.6
76856 *	ECHO EXAM OF PELVIS		53.2	48.1	6.2	107.5
76857 *	ECHO EXAM OF PELVIS		48.8	29.7	4.1	82.6
77400 *	DAILY RADIATION THERAPY		24.1	21.3	2.2	47.6
77405 *	DAILY RADIATION THERAPY		28.3	28.9	3.2	60.4
77410 *	DAILY RADIATION THERAPY		36.8	35.0	3.9	75.7
77415 *	PORT VERIFICATION FILMS		15.1	9.7	1.1	25.9
77420 *	WEEKLY RADIATION THERAPY		47.5	45.5	4.6	97.6
77425 *	WEEKLY RADIATION THERAPY		90.2	71.9	7.9	170.0
77430 *	WEEKLY RADIATION THERAPY		95.2	65.3	7.3	167.8
77465 *	DAILY KILOVOLTAGE TREATMENT		19.2	15.3	1.1	35.6
77470 *	SPECIAL RADIATION TREATMENT		35.7	36.1	3.4	75.2
77750 *	INFUSE RADIOACTIVE MATERIALS		52.9	35.1	3.8	91.8
77761 *	RADIOELEMENT APPLICATION		57.6	60.3	6.8	124.7
77762 *	RADIOELEMENT APPLICATION		104.0	143.7	17.2	264.9
77763 *	RADIOELEMENT APPLICATION		114.9	199.4	24.9	339.2
77776 *	RADIOELEMENT APPLICATION		76.5	103.6	7.3	187.4
77777 *	RADIOELEMENT APPLICATION		161.3	129.5	9.3	300.1
77778 *	RADIOELEMENT APPLICATION		206.5	310.4	34.8	551.7
77789 *	RADIOELEMENT APPLICATION		14.3	21.7	2.0	38.0
77790 *	RADIOELEMENT HANDLING		27.2	43.4	4.8	75.4
78300 *	NUCLEAR SCAN OF BONE		14.5	43.2	4.9	62.6
78305 *	NUCLEAR SCAN OF BONES	PC	14.5	24.7	2.7	41.9
78305 *	NUCLEAR SCAN OF BONES		17.8	64.7	6.9	89.4
78306 *	NUCLEAR SCAN OF SKELETON	PC	15.6	26.3	2.9	44.8

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
78306 *	NUCLEAR SCAN OF SKELETON		20.3	70.8	7.8	98.9
78310 *	BONE BLOOD FLOW SCAN	PC	10.4	17.3	1.9	29.6
78310 *	BONE BLOOD FLOW SCAN		14.8	29.2	3.2	47.2
78315 *	NUCLEAR SCAN OF BONE		10.1	81.9	8.9	100.9
78350 *	BONE MINERAL CONTENT STUDY	PC	11.8	12.7	1.3	25.8
78350 *	BONE MINERAL CONTENT STUDY		20.8	37.3	4.2	62.3
78351 *	BONE MINERAL CONTENT STUDY	PC	11.2	18.3	2.1	31.6
78351 *	BONE MINERAL CONTENT STUDY		20.8	52.5	7.5	80.8
78380 *	NUCLEAR SCAN OF JOINT	PC	12.6	16.2	1.7	30.5
78380 *	NUCLEAR SCAN OF JOINT		15.1	38.5	3.6	57.2
78381 *	NUCLEAR SCAN OF JOINTS	PC	14.3	20.9	2.3	37.5
78381 *	NUCLEAR SCAN OF JOINTS		19.5	65.2	8.0	92.7
80500	LAB PATHOLOGY CONSULTATION		10.7	6.9	0.5	18.1
80502	LAB PATHOLOGY CONSULTATION		32.6	12.4	1.0	46.0
85095	BONE MARROW ASPIRATION		40.9	21.0	1.7	63.6
85097	BONE MARROW INTERPRETATION		35.7	15.0	1.2	51.9
85100	BONE MARROW EXAMINATION		55.4	33.7	2.7	91.8
85101	ASPIRATE, STAIN BONE MARROW		38.4	22.5	1.8	62.7
85102	BONE MARROW BIOPSY		46.9	26.7	2.2	75.8
88104	CYTOPATHOLOGY		20.8	7.2	0.6	28.6
88125	FORENSIC CYTOPATHOLOGY		8.0	6.0	0.5	14.5
88130	SEX CHROMATIN IDENTIFICATION		12.6	4.6	0.4	17.6
88162	CYTOPATHOLOGY, EXTENSIVE		25.8	12.6	1.0	39.4
88170	FINE NEEDLE ASPIRATION		36.5	20.0	2.5	59.0
88171	FINE NEEDLE ASPIRATION		44.7	23.8	2.1	70.6
88172	EVALUATION OF SMEAR		33.7	10.7	0.9	45.3
88173	INTERPRETATION OF SMEAR		34.8	14.5	1.2	50.5
88300	SURG. PATH. GROSS		1.9	3.8	0.3	6.0
88302	SURG PATH, GROSS AND MICRO		3.3	8.8	0.7	12.8
88304	SURG PATH, GROSS AND MICRO		6.9	12.1	0.8	19.8
88305	SURG PATH, GROSS AND MICRO		28.8	18.2	1.4	48.4
88307	SURG PATH, GROSS AND MICRO		35.1	25.2	1.9	62.2
88309	SURG PATH, GROSS AND MICRO		72.7	33.8	2.7	109.2
88321	MICROSLIDE CONSULTATION		26.1	12.9	0.9	39.9
88323	MICROSLIDE CONSULTATION		22.5	12.3	0.8	35.6
88325	COMPREHENSIVE REVIEW OF DATA		26.1	14.7	1.1	41.9
88329	CONSULTATION DURING SURGERY		33.5	11.5	0.9	45.9
88331	CONSULTATION DURING SURGERY		40.9	19.6	1.5	62.0
88332	CONSULTATION DURING SURGERY		23.0	10.5	0.8	34.3
88348	ELECTRON MICROSCOPY		78.4	39.9	3.3	121.6
90000	OFFICE/OP VISIT, NEW, BRIEF		12.9	10.7	1.3	24.9
90010	OFFICE/OP VISIT, NEW, LTD		16.7	13.0	1.6	31.3
90015	OFFICE/OP VISIT, NEW, INTERM		20.6	15.4	2.0	38.0
90017	OFFICE/OP VISIT, NEW, EXTEND		28.3	17.2	2.3	47.8
90020	OFFICE/OP VISIT, NEW, COMPRH		35.9	22.9	3.0	61.8
90030	OFFICE/OP VISIT, EST, MINIM		6.3	5.3	0.5	12.1
90040	OFFICE/OP VISIT, EST, BRIEF		12.9	7.7	0.8	21.4
90050	OFFICE/OP VISIT, EST, LTD		16.7	8.9	0.9	26.5
90060	OFFICE/OP VISIT, EST, INTERM		20.6	10.7	1.1	32.4
90070	OFFICE/OP VISIT, EST, EXTEND		28.3	13.6	1.4	43.3
90080	OFFICE/OP VISIT, EST, COMPRH		35.9	20.2	2.2	58.3
90200	HOSPITAL CARE, NEW, BRIEF		20.0	20.9	2.3	43.2
90215	HOSPITAL CARE,NEW, INTERMED.		33.7	26.4	2.7	62.8
90220	HOSPITAL CARE, NEW, COMPREH.		60.9	32.7	3.3	96.9
90225	HOSPITAL CARE, NEW, NEWBORN		60.9	14.4	2.1	77.4
90240	HOSPITAL VISIT, BRIEF		15.4	9.0	0.9	25.3
90250	HOSPITAL VISIT, LIMITED		20.0	10.8	1.0	31.8

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
90260	HOSPITAL VISIT, INTERMEDIATE		24.4	12.2	1.1	37.7
90270	HOSPITAL VISIT, EXTENDED		33.7	15.7	1.5	50.9
90280	HOSPITAL VISIT,COMPREHENSIVE		42.8	16.4	1.6	60.8
90282	NORMAL NEWBORN CARE,HOSPITAL		24.4	11.0	1.1	36.5
90300	CARE FACILITY VISIT, BRIEF		17.6	12.5	1.2	31.3
90315	CARE FACILITY VISIT,INTERMED		29.9	15.2	1.4	46.5
90320	CARE FACILITY VISIT, COMPRH.		54.0	24.2	2.1	80.3
90340	CARE FACILITY VISIT, BRIEF		13.7	8.7	0.8	23.2
90350	CARE FACILITY VISIT, LIMITED		17.6	10.0	0.9	28.5
90360	CARE FACILITY VISIT,INTERMED		21.7	11.2	1.0	33.9
90370	CARE FACILITY VISIT, EXTEND.		29.9	14.2	1.3	45.4
90600	LIMITED CONSULTATION		19.2	21.0	3.1	43.3
90605	INTERMEDIATE CONSULTATION		32.4	22.0	3.0	57.4
90610	EXTENDED CONSULTATION		45.5	27.7	3.9	77.1
90620	COMPREHENSIVE CONSULTATION		58.7	36.0	4.5	99.2
90630	COMPLEX CONSULTATION		72.1	47.2	5.7	125.0
90640	BRIEF FOLLOW-UP CONSULT		14.5	9.3	1.0	24.8
90641	LIMITED FOLLOW-UP CONSULT		19.2	11.7	1.2	32.1
90642	INTERMEDIAT FOLLOWUP CONSULT		23.6	14.8	1.4	39.8
90643	COMPLEX FOLLOW-UP CONSULT		72.1	20.5	2.0	94.6
90750	PREVENTIVE MEDICINE, ADULT		28.3	14.1	1.9	44.3
90752	PREVENTIVE MEDICINE, 5-11		24.4	2.9	0.3	27.6
90760	PREVENTIVE MEDICINE, ADULT		28.3	13.9	1.6	43.8
90761	PREVENTIVE MEDICINE, 12-17		28.3	19.2	2.6	50.1
90762	PREVENTIVE MEDICINE, 5-11		20.6	7.0	0.6	28.2
90825	EVALUATION OF TESTS/RECORDS		61.2	9.6	1.1	71.9
90831	TELEPHONE CONSULTATION		20.6	5.9	0.7	27.2
90835	SPECIAL INTERVIEW		42.5	10.2	1.2	53.9
90847	SPECIAL FAMILY THERAPY		69.7	9.5	1.1	80.3
90849	SPECIAL FAMILY THERAPY		85.6	3.8	0.4	89.8
90880	MEDICAL HYPNOTHERAPY		68.6	12.9	1.3	82.8
90887	CONSULTATION WITH FAMILY		44.4	8.1	0.9	53.4
92004	NEW EYE EXAM & TREATMENT		27.2	19.1	1.6	47.9
92012	EYE EXAM & TREATMENT		14.5	13.6	1.1	29.2
92014	EYE EXAM & TREATMENT		17.6	17.8	1.5	36.9
92020	SPECIAL EYE EVALUATION		10.1	9.0	0.8	19.9
92060	SPECIAL EYE EVALUATION		12.3	12.1	1.1	25.5
92065	ORTHOPTIC/PLEOPTIC TRAINING		8.5	8.8	0.7	18.0
92070	FITTING OF CONTACT LENS		35.9	46.9	4.0	86.8
92081	VISUAL FIELD EXAMINATION(S)		10.7	10.6	0.9	22.2
92082	VISUAL FIELD EXAMINATION(S)		14.5	15.9	1.3	31.7
92083	VISUAL FIELD EXAMINATION(S)		22.2	26.7	2.2	51.1
92100	SERIAL TONOMETRY EXAM(S)		7.7	8.8	0.7	17.2
92120	TONOGRAPHY & EYE EVALUATION		9.1	9.4	0.8	19.3
92130	WATER PROVOCATION TONOGRAPHY		15.4	15.2	1.3	31.9
92140	GLAUCOMA PROVOCATIVE TESTS		8.2	9.0	0.8	18.0
92225	EXTENDED OPHTHALMOSCOPY, NEW		12.6	14.0	1.2	27.8
92230	OPHTHALMOSCOPY/ANGIOSCOPY		23.6	23.2	2.0	48.8
92235	OPHTHALMOSCOPY/ANGIOGRAPHY		47.7	56.2	4.7	108.6
92250	OPHTHALMOSCOPY; FUNDUS PHOTO		6.9	11.0	0.9	18.8
92260	OPHTHALMOSCOPY/DYNAMOMETRY		9.6	16.5	1.4	27.5
92270	ELECTRO-OCULOGRAPHY		5.8	21.3	2.1	29.2
92275	ELECTRORETINOGRAPHY		10.7	40.4	3.4	54.5
92280	SPECIAL EYE EVALUATION		10.7	32.7	2.8	46.2
92283	COLOR VISION EXAMINATION		3.6	10.8	0.9	15.3
92284	DARK ADAPTATION EYE EXAM		6.3	17.9	1.5	25.7
92285	EYE PHOTOGRAPHY		5.5	11.3	0.9	17.7
92286	INTERNAL EYE PHOTOGRAPHY		14.8	46.8	3.9	65.5
92287	INTERNAL EYE PHOTOGRAPHY		17.3	43.9	3.7	64.9
92502	EAR AND THROAT EXAMINATION		28.0	27.1	4.2	59.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
92504	EAR MICROSCOPY EXAMINATION		11.5	9.5	1.2	22.2
92506	SPEECH & HEARING EVALUATION		24.4	12.7	1.9	39.0
92507	SPEECH/HEARING THERAPY		19.2	11.3	1.6	32.1
92508	SPEECH/HEARING THERAPY		18.1	3.5	0.4	22.0
92511	NASOPHARYNGOSCOPY		48.8	25.8	4.2	78.8
92512	NASAL FUNCTION STUDIES		24.4	15.1	2.0	41.5
92516	FACIAL NERVE FUNCTION TEST		20.8	12.4	2.1	35.3
92520	LARYNGEAL FUNCTION STUDIES		35.9	16.1	2.4	54.4
92541	SPONTANEOUS NYSTAGMUS TEST		22.8	18.0	2.9	43.7
92542	POSITIONAL NYSTAGMUS TEST		13.7	11.2	1.8	26.7
92543	CALORIC VESTIBULAR TEST		18.4	14.9	2.4	35.7
92544	OPTOKINETIC NYSTAGMUS TEST		10.1	8.6	1.4	20.1
92545	OSCILLATING TRACKING TEST		9.3	8.0	1.3	18.6
92546	TORSION SWING RECORDING		13.4	8.6	1.4	23.4
92547	SUPPLEMENTAL ELECTRICAL TEST		12.9	9.9	1.6	24.4
92551	PURE TONE HEARING TEST, AIR		3.6	6.0	0.7	10.3
92552	PURE TONE AUDIOMETRY, AIR		3.6	6.6	1.0	11.2
92553	AUDIOMETRY, AIR & BONE		4.9	9.7	1.6	16.2
92555	SPEECH THRESHOLD AUDIOMETRY		3.3	5.6	0.9	9.8
92556	SPEECH AUDIOMETRY, COMPLETE		4.7	8.4	1.4	14.5
92557	COMPREHENSIVE AUDIOMETRY		9.1	17.5	2.9	29.5
92559	GROUP AUDIOMETRIC TESTING		11.2	31.8	5.1	48.1
92560	BEKESY AUDIOMETRY, SCREEN		5.8	7.7	0.8	14.3
92561	BEKESY AUDIOMETRY, DIAGNOSIS		7.1	10.8	1.4	19.3
92562	LOUDNESS BALANCE TEST		3.6	5.4	0.8	9.8
92563	TONE DECAY HEARING TEST		4.9	6.1	1.0	12.0
92564	SISI HEARING TEST		4.1	5.4	0.9	10.4
92565	STENGER TEST, PURE TONE		3.0	5.4	0.8	9.2
92566	IMPEDANCE HEARING TEST		4.9	9.1	1.5	15.5
92567	TYMPANOMETRY		3.8	7.2	1.1	12.1
92568	ACOUSTIC REFLEX TESTING		3.6	5.1	0.8	9.5
92569	ACOUSTIC REFLEX DECAY TEST		4.1	6.2	1.0	11.3
92571	FILTERED SPEECH HEARING TEST		3.8	6.0	1.0	10.8
92572	STAGGERED SPONDAIC WORD TEST		1.1	4.3	0.6	6.0
92575	SENSORINEURAL ACUITY TEST		3.8	5.3	0.9	10.0
92576	SYNTHETIC SENTENCE TEST		3.0	5.2	0.9	9.1
92577	STENGER TEST, SPEECH		8.5	10.0	1.5	20.0
92580	ELECTRODERMAL AUDIOMETRY		8.8	9.1	1.3	19.2
92581	EVOKED RESPONSE AUDIOMETRY		19.7	60.2	8.8	86.7
92582	CONDITIONING PLAY AUDIOMETRY		8.8	9.1	1.3	19.2
92584	ELECTROCOCHLEOGRAPHY		28.8	32.1	4.9	65.8
92585	BRAINSTEM EVOKED AUDIOMETRY		27.7	50.6	8.0	86.3
92589	AUDITORY FUNCTION TEST(S)		7.7	7.7	1.2	16.6
92590	HEARING AID EXAM, ONE EAR		17.6	27.8	4.3	49.7
92591	HEARING AID EXAM, BOTH EARS		17.0	105.3	14.9	137.2
92592	HEARING AID CHECK, ONE EAR		7.1	9.5	1.5	18.1
92593	HEARING AID CHECK, BOTH EARS		8.0	3.3	0.5	11.8
92594	ELECTRO HEARING AID TEST,ONE		6.3	3.4	0.6	10.3
92595	ELECTRO HEARINGAID TEST,BOTH		6.9	1.6	0.3	8.8
92596	EAR PROTECTOR EVALUATION		9.3	9.3	1.5	20.1
93000	ELECTROCARDIOGRAM, COMPLETE		7.7	14.7	1.3	23.7
93005	ELECTROCARDIOGRAM, TRACING		3.3	9.9	1.0	14.2
93010	ELECTROCARDIOGRAM REPORT		3.3	6.1	0.5	9.9
93012	TRANSMISSION OF ECG		7.1	14.4	1.4	22.9
93014	REPORT ON TRANSMITTED ECG		6.0	7.6	0.7	14.3
93018	CARDIOVASCULAR STRESS TEST		17.8	29.0	2.4	49.2
93024	CARDIAC DRUG STRESS TEST		15.1	46.8	3.9	65.8
93040	RHYTHM ECG WITH REPORT		4.4	6.4	0.6	11.4
93041	RHYTHM ECG, TRACING		3.8	4.8	0.4	9.0
93042	RHYTHM ECG, REPORT		3.3	4.3	0.4	8.0

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
93045	RHYTHM ECG		4.4	11.1	0.9	16.4
93201	PHONOCARDIOGRAM & ECG LEAD		9.3	17.4	1.8	28.5
93202	PHONOCARDIOGRAM & ECG LEAD		5.5	7.9	0.7	14.1
93204	PHONOCARDIOGRAM & ECG LEAD		5.5	5.5	0.5	11.5
93205	SPECIAL PHONOCARDIOGRAM		18.7	41.5	3.9	64.1
93209	SPECIAL PHONOCARDIOGRAM		17.8	15.2	2.0	35.0
93210	INTRACARDIAC PHONOCARDIOGRAM		8.0	15.3	1.4	24.7
93220	VECTORCARDIOGRAM		15.6	15.6	1.3	32.5
93222	VECTORCARDIOGRAM REPORT		8.8	17.3	1.4	27.5
93240	BALLISTOCARDIOGRAM		10.7	8.2	0.7	19.6
93255	APEXCARDIOGRAPHY		8.2	6.1	1.4	15.7
93259	ELECTROCARDIOGRAM MONITORING		21.9	34.1	2.9	58.9
93262	ELECTROCARDIOGRAM MONITORING		42.2	82.5	7.0	131.7
93263	ELECTROCARDIOGRAM MONITORING		32.9	72.7	6.1	111.7
93266	ELECTROCARDIOGRAM MONITORING		38.4	62.7	5.2	106.3
93268	ECG RECORD/REVIEW		11.0	14.9	1.4	27.3
93501	RIGHT HEART CATHETERIZATION		85.9	162.9	18.1	266.9
93503	INSERT/PLACE HEART CATHETER		66.9	117.4	15.6	199.9
93505	BIOPSY OF HEART LINING		74.6	120.7	20.5	215.8
93510	LEFT HEART CATHETERIZATION		91.3	150.1	13.0	254.4
93511	LEFT HEART CATHETERIZATION		90.5	120.3	10.4	221.2
93524	LEFT HEART CATHETERIZATION		94.1	133.5	13.2	240.8
93526	RT & LT HEART CATHETERS		132.2	239.2	20.1	391.5
93527	RT & LT HEART CATHETERS		169.0	223.9	19.9	412.8
93528	RT & LT HEART CATHETERS		173.6	181.2	24.1	378.9
93535	INSERTION/REMOVE CATHETER		180.8	202.5	44.1	427.4
93536	INSERT CIRCULATION ASSIST		121.2	246.4	47.2	414.8
94010	BREATHING CAPACITY TEST		15.6	13.7	1.2	30.5
94070	BRONCHOSPASM EVALUATION		28.5	29.3	2.6	60.4
94620	PULMONARY STRESS TESTING		28.3	23.3	2.0	53.6
94650	PRESSURE BREATHING (IPPB)		8.0	5.8	0.5	14.3
94651	PRESSURE BREATHING (IPPB)		6.9	4.8	0.4	12.1
94652	PRESSURE BREATHING (IPPB)		2.2	6.0	0.5	8.7
94656	INITIAL VENTILATION ASSIST		44.2	37.5	3.4	85.1
94657	CONTINUED VENTILATION ASSIST		27.4	22.5	2.0	51.9
94660	POS AIRWAY PRESSURE, CPAP		26.6	21.2	1.9	49.7
94662	NEG PRESSURE VENTILATION,CNP		20.3	9.7	0.9	30.9
94664	AEROSOL OR VAPOR INHALATIONS		8.8	8.2	0.7	17.7
95027	SKIN END POINT TITRATION		44.4	4.5	0.7	49.6
95065*	NOSE ALLERGY TEST		20.6	3.2	0.3	24.1
95070	BRONCHIAL ALLERGY TESTS		66.9	13.3	1.4	81.6
95071	BRONCHIAL ALLERGY TESTS		33.7	3.0	0.3	37.0
95078	PROVOCATIVE TESTING		35.1	6.1	0.8	42.0
96900	ULTRAVIOLET LIGHT THERAPY		9.6	5.5	0.3	15.4
96910	PHOTOCHEMOTHERAPY WITH UV-B		14.8	8.8	0.4	24.0
96912	PHOTOCHEMOTHERAPY WITH UV-A		17.0	9.9	0.5	27.4
99013	TELEPHONE CONSULTATION		10.7	1.8	0.2	12.7
99014	TELEPHONE CONSULTATION		15.4	3.6	0.3	19.3
99015	TELEPHONE CONSULTATION		20.0	6.5	0.5	27.0
99065	EMERGENCY CARE SERVICES		60.9	10.2	1.1	72.2
99152	NEWBORN RESUSCITATION		78.2	23.3	1.9	103.4
99155	MEDICAL CONFERENCE		24.4	14.9	1.4	40.7
99156	MEDICAL CONFERENCE		43.6	23.5	2.3	69.4
99160	CRITICAL CARE, EACH HOUR		60.9	40.3	3.6	104.8
99162	CRITICAL CARE, ADDED 30 MIN		33.7	17.9	1.7	53.3

ADDENDUM C

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
510	5	BIRMINGHAM, AL	0.981	0.913	0.826
510	4	MOBILE, AL	0.964	0.911	0.826
510	2	NORTH CENTRAL AL	0.970	0.867	0.826
510	1	NORTHWEST AL	0.985	0.869	0.826
510	6	RURAL AL	0.975	0.851	0.826
510	3	SOUTHEAST AL	0.972	0.869	0.819
1020	1	ALASKA	1.106	1.255	1.045
1030	5	FLAGSTAFF (CITY), AZ	0.983	0.911	1.258
1030	1	PHOENIX (CITY), AZ	1.003	1.016	1.258
1030	7	PRESCOTT (CITY), AZ	0.983	0.911	1.258
1030	99	RURAL ARIZONA	0.987	0.943	1.258
1030	2	TUCSON (CITY), AZ	0.987	0.989	1.258
1030	8	YUMA (CITY), AZ	0.983	0.911	1.258
520	13	ARKANSAS	0.960	0.856	0.309
2050	26	ANAHEIM-SANTA ANA, CA	1.046	1.220	1.374
542	14	BAKERSFIELD, CA	1.028	1.050	1.374
542	11	FRESNO/MADERA, CA	1.006	1.009	1.374
542	13	KINGS/TULARE, CA	0.999	1.001	1.374
2050	18	LOS ANGELES, CA (1ST OF 8)	1.060	1.196	1.374
2050	19	LOS ANGELES, CA (2ND OF 8)	1.060	1.196	1.374
2050	20	LOS ANGELES, CA (3RD OF 8)	1.060	1.196	1.374
2050	21	LOS ANGELES, CA (4TH OF 8)	1.060	1.196	1.374
2050	22	LOS ANGELES, CA (5TH OF 8)	1.060	1.196	1.374
2050	23	LOS ANGELES, CA (6TH OF 8)	1.060	1.196	1.374
2050	24	LOS ANGELES, CA (7TH OF 8)	1.060	1.196	1.374
2050	25	LOS ANGELES, CA (8TH OF 8)	1.060	1.196	1.374
542	3	MARIN/NAPA/SOLANO, CA	1.012	1.198	1.374
542	10	MERCED/SURR. CNTYS, CA	1.018	1.009	1.374
542	12	MONTEREY/SANTA CRUZ, CA	1.023	1.108	1.374
542	1	N. COASTAL CNTYS, CA	1.003	1.072	1.374
542	2	NE RURAL CA	1.001	0.990	1.374
542	7	OAKLAND-BERKELEY, CA	1.028	1.258	1.374
542	27	RIVERSIDE, CA	1.026	1.080	1.374
542	4	SACRAMENTO/SURR. CNTYS, CA	1.026	1.088	1.374
542	15	SAN BERNADINO/E.CENTRAL CA	1.025	1.077	1.374
2050	28	SAN DIEGO/IMPERIAL, CA	1.026	1.090	1.374
542	5	SAN FRANCISCO, CA	1.038	1.303	1.374
542	6	SAN MATEO, CA	1.038	1.303	1.374
2050	16	SANTA BARBARA, CA	1.012	1.073	1.374
542	9	SANTA CLARA, CA	1.048	1.286	1.374
542	8	STOCKTON/SURR. CNTYS, CA	1.019	1.027	1.374
2050	17	VENTURA, CA	1.034	1.132	1.374
550	1	COLORADO	0.999	0.988	0.685

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
10230	4	EASTERN CONN.	0.999	1.053	1.056
10230	1	NW AND N.CENTRAL CONN.	1.002	1.071	1.030
10230	3	SOUTH CENTRAL CONN.	1.018	1.103	1.190
10230	2	SW CONNECTICUT	1.053	1.139	1.234
570	1	DELAWARE	1.026	1.018	0.665
580	1	D.C. + MD/VA SUBURBS	1.059	1.168	0.924
590	3	FORT LAUDERDALE, FL	0.993	0.981	1.380
590	4	MIAMI, FL	1.034	1.025	1.645
590	2	N/NC FLORIDA CITIES	0.975	0.932	1.110
590	1	RURAL FLORIDA	0.966	0.871	1.110
1040	1	ATLANTA, GA	0.975	1.022	0.753
1040	4	RURAL GEORGIA	0.956	0.841	0.751
1040	2	SMALL GA CITIES 02	0.962	0.895	0.753
1040	3	SMALL GA CITIES 03	0.961	0.869	0.719
1120	1	HAWAII	1.003	1.094	1.028
5130	12	NORTH IDAHO	0.965	0.917	0.891
5130	11	SOUTH IDAHO	0.967	0.936	0.891
621	10	CHAMPAIGN-URBANA, IL	0.965	0.920	1.140
621	16	CHICAGO, IL	1.044	1.114	1.778
621	3	DE KALB, IL	0.978	0.925	1.140
621	11	DECATUR, IL	0.981	0.927	1.140
621	12	EAST ST. LOUIS, IL	0.989	0.958	1.360
621	6	KANKAKEE, IL	0.972	0.925	1.140
621	8	NORMAL, IL	0.997	0.968	1.140
621	1	NORTHWEST, IL	0.974	0.896	1.140
621	5	PEORIA, IL	1.009	1.031	1.140
621	7	QUINCY, IL	0.974	0.896	1.140
621	4	ROCK ISLAND, IL	0.995	0.958	0.832
621	2	ROCKFORD, IL	1.010	1.018	1.361
621	13	SOUTHEAST IL	0.974	0.896	1.140
621	14	SOUTHERN IL	0.974	0.896	1.140
621	9	SPRINGFIELD, IL	0.996	0.966	1.140
621	15	SUBURBAN CHICAGO, IL	1.020	1.097	1.387
630	1	METROPOLITAN INDIANA	0.998	0.963	0.556
630	3	RURAL INDIANA	0.979	0.896	0.529
630	2	URBAN INDIANA	0.980	0.905	0.531
640	5	DES MOINES(POLK/WARREN),IA	0.997	0.966	0.667
640	8	IOWA CITY (CITY LIMITS)	0.960	0.967	0.667
640	3	NORTH CENTRAL IOWA	0.971	0.916	0.667
640	2	NORTHEAST IOWA	0.972	0.918	0.667
640	6	NORTHWEST IOWA	0.969	0.890	0.667
640	4	S.CEN. IA(EXCL DES MOINES)	0.962	0.881	0.667
640	1	SE IOWA (EXCL IOWA CITY)	0.978	0.929	0.667
640	7	SOUTHWEST IOWA	0.968	0.900	0.616
740	5	KANSAS CITY, KA	0.978	0.964	1.181
650	1	RURAL KANSAS	0.953	0.893	0.775
740	4	SUBURBAN KANSAS CITY, KA	0.978	0.964	1.181

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
660	1	LEXINGTON & LOUISVILLE, KY	0.984	0.917	0.668
660	3	RURAL KENTUCKY	0.974	0.875	0.676
660	2	SM CITIES (CITY LIMITS) KY	0.976	0.898	0.711
528	7	ALEXANDRIA, LA	0.985	0.889	0.810
528	3	BATON ROUGE, LA	0.991	0.966	0.810
528	6	LAFAYETTE, LA	0.982	0.928	0.810
528	4	LAKE CHARLES, LA	0.975	0.907	0.810
528	5	MONROE, LA	0.979	0.880	0.810
528	1	NEW ORLEANS, LA	0.994	1.003	1.187
528	50	RURAL LOUISIANA	0.972	0.880	0.851
528	2	SHREVEPORT, LA	1.003	0.940	0.810
21200	2	CENTRAL MAINE	0.942	0.903	0.718
21200	1	NORTHERN MAINE	0.947	0.912	0.718
21200	3	SOUTHERN MAINE	0.956	0.980	0.718
690	1	BALTIMORE/SURR. CNTYS, MD	1.027	1.040	0.972
690	3	SOUTH + E. SHORE MD	1.011	1.010	0.847
690	2	WESTERN MARYLAND	1.006	1.013	0.873
700	2	MASS.SUBURBS/RURAL(CITIES)	0.997	1.072	0.857
700	1	MASSACHUSETTS URBAN	1.002	1.131	0.857
710	1	DETROIT, MI	1.059	1.091	1.740
710	2	MICHIGAN, NOT DETROIT	1.010	0.971	1.256
720	2	NORTHERN MINNESOTA	0.983	0.919	0.747
720	4	SOUTHERN MINNESOTA	0.979	0.901	0.749
10240	1	ST. PAUL-MINNEAPOLIS, MN	1.014	1.024	0.749
10250	1	RURAL MISSISSIPPI	0.960	0.838	0.645
10250	2	URBAN MS (CITY LIMITS)	0.966	0.902	0.652
740	3	K.C. (JACKSON COUNTY), MO	0.978	0.964	1.181
740	2	N. K.C. (CLAY/PLATTE), MO	0.978	0.964	1.181
11260	3	RURAL (EXCL RURAL NW) MO	0.950	0.847	1.193
740	6	RURAL NW COUNTIES, MO	0.953	0.866	1.181
11260	2	SM. E.CITIES+JEFF.CNTY,MO	0.973	0.907	1.301
740	1	ST. JOSEPH, MO	0.950	0.867	1.181
11260	1	ST. LOUIS/LG. E.CITIES, MO	0.988	0.963	1.388
751	1	MONTANA	0.967	0.926	0.720
655	15	OMAHA + LINCOLN, NE	0.971	0.929	0.436
655	16	RURAL NEBRASKA	0.952	0.849	0.443
655	17	URBAN (CNTY POP>25000) NE	0.956	0.865	0.436
1290	3	ELKO & ELY (CITIES), NV	0.984	1.026	1.147
1290	1	LAS VEGAS,ET AL(CITIES),NV	1.036	1.082	1.147
1290	2	RENO, ET AL (CITIES), NV	1.008	1.141	1.147
1290	99	RURAL NEVADA	1.020	1.079	1.147
780	40	NEW HAMPSHIRE	0.962	1.011	0.603
860	2	MIDDLE NEW JERSEY	1.034	1.070	1.297
860	1	NORTHERN NEW JERSEY	1.040	1.131	1.152
860	3	SOUTHERN NEW JERSEY	1.016	1.030	1.476
1360	1	NEW MEXICO	0.981	0.925	0.769
801	1	BUFFALO/SURR. CNTYS, NY	1.006	0.942	0.966

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
803	1	MANHATTAN, NY	1.059	1.255	1.865
801	3	N. CENTRAL CITIES, NY	0.997	0.952	0.966
803	2	NYC SUBURBS/LONG I., NY	1.060	1.229	1.959
803	3	POUGHKPSIE/N.NYC SUBURBS	1.004	1.018	1.225
14330	4	QUEENS, NY	1.059	1.255	1.865
801	2	ROCHESTER/SURR. CNTYS, NY	1.021	1.017	0.966
801	4	RURAL NEW YORK	0.988	0.935	0.966
5535	95	RURAL NORTH CAROLINA	0.963	0.883	0.378
5535	94	URBAN (CITY LIMITS) NC	0.975	0.926	0.378
820	1	NORTH DAKOTA	0.965	0.895	0.690
16360	1	AKRON, OH	0.993	0.944	0.923
16360	2	CINCINATI, OH	0.989	0.956	0.923
16360	3	CLEVELAND, OH	1.011	0.968	0.923
16360	4	COLUMBUS, OH	0.983	0.956	0.923
16360	5	DAYTON, OH	0.999	0.935	0.923
16360	9	E. CENTRAL (STEUBENVL), OH	0.974	0.912	0.923
16360	7	MANSFIELD, OH	0.972	0.906	0.923
16360	13	MARION + SURR. CNTYS., OH	0.971	0.911	0.923
16360	6	NORTHWEST (LIMA) OH	0.973	0.919	0.923
16360	14	SCIOTO VALLEY, OH	0.977	0.936	0.923
16360	15	SOUTHEAST (OHIO VALLEY) OH	0.973	0.909	0.848
16360	8	SPRINGFIELD, OH	1.004	0.940	0.923
16360	10	TOLEDO (LUCAS/WOOD), OH	0.991	0.996	0.923
16360	12	W. CENTR (LAKE PLAINS), OH	0.969	0.906	0.923
16360	11	YOUNGSTOWN, OH	0.987	0.937	0.923
1370	1	OK CITY, ET AL (CITIES),OK	0.969	0.961	0.517
1370	99	RURAL OKLAHOMA	0.967	0.877	0.513
1370	4	SM. CITIES (NORTHERN), OK	0.961	0.874	0.517
1370	3	SM. CITIES (SOUTHERN), OK	0.967	0.865	0.517
1370	2	TULSA, ET AL (CITIES), OK	0.978	0.953	0.517
1380	2	EUGENE, ET AL (CITIES), OR	0.968	1.008	0.953
1380	1	PORTLAND,ET AL (CITIES),OR	0.993	1.033	0.953
1380	99	RURAL OREGON	0.979	0.997	0.953
1380	3	SALEM, ET AL (CITIES), OR	0.974	0.991	0.953
1380	12	SW OR. CITIES(CITY LIMITS)	0.974	0.988	0.953
865	2	LG. PENNSYLVANIA CITIES	1.007	1.001	1.362
865	1	PHILLY/PITT MED SCHS/HOSPS	1.014	1.014	1.467
865	4	RURAL PENNSYLVANIA	0.976	0.935	0.932
865	3	SMALL PENNSYLVANIA CITIES	0.984	0.941	0.949
973	20	PUERTO RICO	0.882	0.764	0.467
870	1	RHODE ISLAND	1.009	0.998	0.736
880	1	SOUTH CAROLINA	0.971	0.874	0.457
820	2	SOUTH DAKOTA	0.951	0.857	0.689
5440	35	TENNESSEE	0.969	0.896	0.408
900	29	ABILENE, TX	0.971	0.888	0.442
900	26	AMARILLO, TX	0.972	0.900	0.505
900	31	AUSTIN, TX	0.969	0.968	0.505

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
900	20	BEAUMONT, TX	0.998	0.955	0.505
900	9	BRAZORIA, TX	1.025	0.955	0.505
900	10	BROWNSVILLE, TX	0.980	0.888	0.505
900	24	CORPUS CHRISTI, TX	0.976	0.944	0.505
900	11	DALLAS, TX	0.996	0.971	0.505
900	12	DENTON, TX	0.996	0.971	0.505
900	14	EL PASO, TX	0.995	0.894	0.505
900	28	FORT WORTH, TX	0.973	0.936	0.505
900	15	GALVESTON, TX	0.982	0.968	0.505
900	16	GRAYSON, TX	0.964	0.903	0.505
900	18	HOUSTON, TX	1.014	0.982	0.657
900	33	LAREDO, TX	0.968	0.856	0.505
900	17	LONGVIEW, TX	0.968	0.929	0.505
900	21	LUBBOCK, TX	0.950	0.881	0.505
900	19	MC ALLEN, TX	0.945	0.873	0.505
900	23	MIDLAND, TX	1.023	0.998	0.505
900	2	NORTHEAST RURAL TEXAS	0.969	0.884	0.465
900	13	ODESSA, TX	1.008	0.971	0.505
900	25	ORANGE, TX	0.998	0.955	0.505
900	30	SAN ANGELO, TX	0.954	0.902	0.505
900	7	SAN ANTONIO, TX	0.973	0.929	0.505
900	3	SOUTHEAST RURAL TEXAS	0.973	0.894	0.494
900	6	TEMPLE, TX	0.969	0.886	0.505
900	8	TEXARKANA, TX	0.953	0.883	0.505
900	27	TYLER, TX	0.984	0.931	0.505
900	32	VICTORIA, TX	0.976	0.973	0.505
900	22	WACO, TX	0.981	0.871	0.505
900	4	WESTERN RURAL TEXAS	0.961	0.852	0.447
900	34	WICHITA FALLS, TX	0.969	0.896	0.505
910	9	UTAH	0.993	0.952	0.741
780	50	VERMONT	0.942	0.941	0.534
10490	1	RICHMOND+CHARLOTTESVL, VA	0.975	0.953	0.464
10490	4	RURAL VIRGINIA	0.967	0.888	0.518
10490	3	SM. TOWN/INDUSTRIAL VA	0.971	0.892	0.538
10490	2	TIDEWATER+N. VA COUNTIES	0.989	0.994	0.703
930	4	E.CEN+NE WA (EXCL SPOKANE)	0.991	0.979	1.067
930	2	SEATTLE (KING CNTY), WA	1.019	1.049	1.067
930	3	SPOKANE+RICHLND(CITIES),WA	0.997	0.997	1.067
930	1	W + SE WA (EXCL SEATTLE)	1.008	0.992	1.067
16510	16	CHARLESTON, WV	0.987	0.962	0.690
16510	18	EASTERN VALLEY, WV	0.962	0.881	0.716
16510	19	OHIO RIVER VALLEY, WV	0.962	0.881	0.690
16510	20	SOUTHERN VALLEY, WV	0.960	0.876	0.690
16510	17	WHEELING, WV	0.975	0.900	0.739
951	13	CENTRAL WISCONSIN	0.960	0.888	0.637
951	40	GREEN BAY, WI (NORTHEAST)	0.979	0.913	0.637
951	54	JANESVILLE, WI (S-CENTRAL)	0.970	0.905	0.637

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
951	19	LA CROSSE, WI (W-CENTRAL)	0.974	0.922	0.651
951	15	MADISON, WI (DANE COUNTY)	0.977	0.979	0.637
951	46	MILWAUKEE SUBURBS, WI (SE)	1.010	1.008	0.637
951	4	MILWAUKEE, WI	1.008	1.009	0.637
951	12	NORTHWEST WISCONSIN	0.970	0.898	0.652
951	60	OSHKOSH, WI (E-CENTRAL)	0.974	0.911	0.637
951	14	SOUTHWEST WISCONSIN	0.960	0.888	0.637
951	36	WAUSAU, WI (N-CENTRAL)	0.971	0.898	0.637
5530	21	WYOMING	0.988	0.938	0.642

Note: Work GPCI is the 1/4 work GPCI required by OBRA 89.

ADDENDUM D

Information for Obtaining Sources of Data
Underlying Model Fee Schedule

National Technical Information Service (NTIS); phone 1-800-336-4700; or (703)487-4630; Springfield, Va 22161

Government Printing Office (GPO); phone (202)783-3238 for orders, (202)275-3050 for service inquiries; (202)275-3054 for complaints; mail to Superintendent of Documents, U.S.G.P.O., Washington, D.C., 20402

1. Harvard Phase I volumes; NTIS;

   Volume I, Executive Summary, PB89-101828

   Volume II, Data description and analysis, PB89-101836

   Volume III, Results and conclusions for surveyed procedures, PB89-101844

   Volume IV, Copies of surveys and other informaiton, PB89-101851

   Volume IVA, Visit and consultation methodology and results, PB89-164412

   Volume V, Documentation for the data tape, PB89-101869

   Volume VI, Final values and components, PB89-164420

   Survey data tape (including Volume IV and Volume V documentation) PB89-101810

   Phase I final values data tape, PB89-164404

2. October 1989 Reports to Congress "Medicare Physician Payment" (HCFA pub. No. 03287); composed of three reports:

   - "Volume and Intensity of Physician Services"

   - "Relative Value Scales for Physician Services" and

   - "Implementation of a National Fee Schedule"

   NTIS accession # PB90-148370
   GPO stock number 017-060-00314-6

3. Center for Health Economics Research (CHER) report on "Geographic Variation in Surgical Fees", NTIS PB90-122466

4. Urban Institute GPCI report "The Geographic Medicare Index: Alternative Approaches"; NTIS PB89-216592

[FR Doc. 90-20678 Filed 8-31-90; 8:45 am]
BILLING CODE 4120-03-C