Room, Veterans Administration Central Office, 810 Vermont Avenue, NW., Washington, DC. All sessions will be open to the public and will be held from 9 a.m. to 4 p.m.

Dated: June 4, 1985.

By direction of the Administrator.

Rosa Maria Fontanez,

Committee Management Officer.

[FR Doc. 85-13878 Filed 6-7-85; 8:45 am]

BILLING CODE 8320-01-M

Sunshine Act Meetings

Federal Register
Vol. 50, No. 111
Monday, June 10, 1985

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

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1

CIVIL RIGHTS COMMISSION

PLACE: Fifth Floor Conference Room, 1121 Vermont Avenue, NW., Washington, D.C.

DATE AND TIME: Wednesday, June 12, 1985, 9:00 a.m.–11:30 a.m.

STATUS OF MEETING: Open to the public.

MATTERS TO BE CONSIDERED:

I. Approval of Agenda
II. Approval of Minutes of Last Meeting
III. Staff Director's Report
  A. Status of Funds
  B. Personnel Report
  C. Office Directors' Reports
IV. Possible Publication of Commission Debate on Comparable Worth
V. Civil Rights Developments in the Mid-Atlantic Region

FOR FURTHER INFORMATION PLEASE CONTACT: Barbara Brooks, Press and Communications Division, (202) 376–8312.

Lawrence B. Glick,
Solicitor.
June 5, 1985.

[FR Doc. 85–13994 Filed 6–6–85; 11:17 am]
BILLING CODE 6335-01-M

2

DEPARTMENT OF EDUCATION

AGENCY: National Council on Educational Research.

ACTION: Full Council Meeting of the National Council on Educational Research.

MATTERS TO BE DISCUSSED: Receive committee reports; Report from the Acting Director of the National Institute of Education (reorganization discussion, lab and center discussion). (Discussion of possible resolutions) Closed session—Internal Personnel Matters.

DATE: Monday, July 1, 1985.

ADDRESS: National Institute of Education, 1200 19th St., NW., Washington, D.C. (Room 823).

STATUS:

9:00 a.m.–10:00 a.m.—Closed
10:00 a.m.–12:00 p.m.—Open
12:00 p.m.–1:30 p.m.—Lunch
1:30 p.m.–5:00 p.m.—Open

TIME: 9:00 a.m.–5:00 p.m.

FOR FURTHER INFORMATION CONTACT: D. Renee Trent, National Council on Educational Research, 2000 L St., NW., Suite 617B Washington, D.C. 20036, 202–254–7490.

SUPPLEMENTARY INFORMATION: The National Council on Educational Research is established under section 405 of the General Provisions Act. The N.C.E.R. meeting will be closed to the public from 9:00 a.m. to 10:00 a.m. to discuss internal personnel matters. The meeting will be closed under the provisions of 34 CFR 705.2(a) (2) and (6) and 5 U.S.C., 552b(c) (2) and (6).

Records are kept of all Council proceedings and are available for public inspection at the office of the National Council on Educational Research at 2000 L St., NW., Suite 617B, Washington, D.C. 20036 between the hours of 8:30 a.m. to 5:00 p.m.

A summary of the activities at the closed session and related matters which are informative to the public consistent with the policy of Title, 5 U.S.C. 552b will be available to the public within fourteen days of the meeting.

Dated: June 6, 1985.

D. Renee Trent,
Authorizing Official, National Council on Educational Research.

[FR Doc. 85–14017 Filed 6–6–85; 3:17 pm]
BILLING CODE 4000-01-M

3

FEDERAL MINE SAFETY AND HEALTH REVIEW COMMISSION

June 5, 1985.

TIME AND DATE: 10:00 a.m., Wednesday, June 12, 1985.

PLACE: Room 600, 1730 K Street, NW., Washington, D.C.

STATUS: Open.

MATTERS TO BE CONSIDERED: The Commission will consider and act upon the following:

1. Secretary of Labor, MSHA v. Kennecott Mineral Co., Utah Copper Division, Docket Nos. WEST 82–155–M, WEST 83–60–M. (Issues include whether 30 CFR 9.22, the berm standard applicable to metal and non-metal open pit mines, is valid.)

Any person intending to attend this meeting who requires special accessibility features and/or auxiliary aids, such as sign language interpreters, must inform the Commission in advance of those needs. Thus, the Commission may, subject to the limitations of 29 CFR 2706.150(a)(3) and 2706.160(e), ensure access for any handicapped person who gives reasonable advance notice.

CONTACT PERSON FOR MORE INFORMATION: Jean Ellen (202) 653–5632.

Jean H. Ellen,
Agenda Clerk.

[FR Doc. 85–13999 Filed 6–6–85; 11:46 am]
BILLING CODE 6735-01-M

federal register

Monday
June 10, 1985

Part II

Environmental Protection Agency

40 CFR Part 271

State Hazardous Waste Programs; Procedures for Approving Revisions; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 271

[SWH-FRL-2828-4]

State Hazardous Waste Programs; Procedures for Approving Revisions

AGENCY: U.S. Environmental Protection Agency.

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency is proposing to amend the procedures in 40 CFR 271.21 for processing revisions to State hazardous waste programs. This amendment is designed to streamline and improve the revision process for the States by eliminating the distinction between substantial and non-substantial revisions and making other changes to the approval procedures. The new process will offer increased public participation by providing an opportunity to comment on all, rather than only substantial, program revisions.

DATES: Comments must be submitted on or before July 10, 1985.

ADDRESSES: Comments on these proposed amendments should be addressed to the Docket Clerk (Docket 3006—Streamlining State Revisions), Office of Solid Waste (WH-562), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. The public docket for this rulemaking is available at Room S-212, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, and is available for viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: The RCRA hotline, toll-free at (800) 424-9346 or in Washington, D.C. at (202) 382-3000, or Frank McAlister, State Programs Branch, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460. Telephone: (202) 382-2210.

SUPPLEMENTARY INFORMATION:

I. Background

States with final authorization under Section 3006(b) of the Resource Conservation and Recovery Act ("RCRA" or "the Act"), 42 U.S.C. 6926, have a continuing obligation to maintain a hazardous waste program that is equivalent to, consistent with, and no less stringent than the Federal hazardous waste program. However, as an interim measure, the Hazardous and Solid Waste Amendments of 1984 (Pub. L. 98-616, November 8, 1984, hereinafter "HSWA") allow States to revise their programs to become substantially equivalent instead of equivalent to the Federal HSWA program. For both the RCRA and HSWA programs, States with final authorization must revise their hazardous waste programs when Federal or State statutory or regulatory authority is modified or when certain other changes occur. Most commonly, State program revisions are necessitated by changes to EPA's regulations in 40 CFR Parts 260-266 and 270-271.

40 CFR 271.21(b) requires States to submit their proposed program revisions to EPA for approval. The rule also specifies two types of EPA approval procedures for program revisions. For substantial program revisions, EPA must issue a public notice in the **Federal Register**, in the major newspapers in the State, and via mail to interested persons. The notice must summarize the proposed revisions, provide for a comment period of at least 30 days, and provide for an opportunity for a public hearing if there is significant public interest. After the comment period and a determination by the Agency that the proposed revisions are in compliance with the requirements of the Act, a notice of approval is published in the **Federal Register**.

As provided by the current 40 CFR 271.21(b), the same procedures do not apply to non-substantial program revisions. Rather, notice of approval of non-substantial program revisions currently may be given simply by a letter from the Administrator to the State, Governor, or his designee.

II. Reason and Basis for Today's Amendment

In light of the magnitude of anticipated changes in State hazardous waste programs necessitated by the new statutory and regulatory requirements stemming from HSWA and other changes EPA will be making to the RCRA programs, we foresee reviewing numerous program revisions for the indefinite future. Further, we anticipate that the HSWA program changes and many non-HSWA changes would likely be considered substantial. We are concerned, therefore, that current procedures for processing substantial program revisions may be too time-consuming and resource-intensive for both the States and EPA. The time element is particularly critical: until a State receives authorization to implement a permitting requirement imposed by HSWA, the State cannot issue a RCRA permit to a facility within its borders. Instead, it must issue a joint permit with EPA whereby EPA adds the HSWA requirements that the State is not authorized to implement.

Our experience in the State authorization process has shown that few public comments tend to be received, and those comments usually are supportive of the State's authorization. Generally we believe little public interest has been shown in most EPA decisions granting final authorization to State programs because the State has already provided for public comments when it developed its regulations. The Federal authorization decision seems to attract less public interest since it primarily involves a comparison of the State program against Federal requirements.

Given the experience described above and our desire to expedite the State revision process, we decided to examine alternative rulemaking procedures. At the same time we decided it would be preferable to increase the opportunity for public comment by allowing the public to participate in decisions on non-substantial program revisions. We concluded that the current procedures for approval of State hazardous waste program revisions can be streamlined while not compromising the opportunity for the public to comment. To increase the opportunity for public involvement in all State program revisions while decreasing the time and resources necessary to process revision applications, we are proposing to eliminate the distinction between substantial and non-substantial program revisions and to substitute two alternative procedures.

One alternative would be to use standard rulemaking procedures. A proposed approval or disapproval would be published in the **Federal Register** with at least a 30-day period for public comment. EPA would review the public comments and then publish a final decision approving or disapproving the proposed revision; this final rule would also contain a response to public comments.

In the second alternative, EPA would publish an "immediate final" rule in the **Federal Register**, indicating that the State revision is approved or disapproved and takes effect 45 days after the date of publication unless EPA receives a negative comment within the 30-day public comment period. Were EPA to receive a negative comment pertaining to the State revision discussed in the notice, the Regional Administrator would notify the State that such comment had been received and that the State's authorization will not take effect on the date identified in the published rule. In addition, before

the effective date of the immediate final rule, a new **Federal Register** action would be published, withdrawing the immediate final approval, identifying the objection and proposing the approval or disapproval of the revision with a public comment period. Then the standard rulemaking procedures identified in the first alternative above would be followed until a final decision is reached.

EPA believes that the States will find this new approach beneficial: Many program revisions will be expedited by the use of the immediate final rule approach, thereby reducing the time during which EPA and State responsibilities for program implementation would overlap. Also, today's proposal increases the opportunity for public participation by expanding it to include all Agency authorization actions.

The immediate final procedure has been used successfully for the approval of revisions of State Implementation Plans (SIPs) under the Clean Air Act, and we believe it will work as well for revisions to State RCRA programs. Unlike current procedures, the public will be informed of EPA's approval or disapproval of every State program revision in the **Federal Register** and will have an opportunity to comment. In most cases EPA does not expect to need to publish more than one **Federal Register** notice since experience has shown that few adverse public comments have been received. However, if EPA anticipates public interest or controversy in the approval or disapproval decision or adverse comments are received, the standard rulemaking procedure alternative would be used instead of the immediate final approach.

The proposed new procedures do not provide for public hearings to be held in conjunction with EPA's authorization decisions. Since there is no legal requirement to provide for hearings on revision decisions and little public interest has been shown to date in attending hearings, we think the opportunity to provide written comments is adequate. However, while the regulatory requirement is deleted, a Regional Administrator, in his discretion, could decide to hold one.

III. Regulatory Impact

Under Executive Order 12291 (46 FR 12193, February 19, 1981), EPA must judge whether a regulation is "major" and therefore subject to the requirement of a Regulatory Impact Analysis. This regulation is not major because it will not result in an annual effect on the economy of $100 million or more, nor will it result in an increase in costs or prices to industry. There will be no adverse impact on the ability of the U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets. The regulation merely streamlines procedures for approving State RCRA program revisions. The Office of Management and Budget has exempted this proposed rulemaking from Executive Order 12291.

IV. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, EPA is required to determine whether a regulation will have a significant impact on a substantial number of small entities so as to require a regulatory flexibility analysis. No regulatory flexibility analysis is required where the head of an agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

The amendments proposed here merely streamline the procedures for approving State hazardous waste program revisions and do not affect the compliance burdens of the regulated community. Therefore, pursuant to 5 U.S.C. 601(b), I certify that this regulation, if issued in final form, will not have a significant economic impact on a substantial number of small entities.

V. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*, EPA must estimate the paperwork burden created by any information collection request contained in a proposed or final rule. Because there are no information collection activities created by this rulemaking, the requirements of the Paperwork Reduction Act do not apply.

Information collection requirements contained elsewhere in 40 CFR Part 271 have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act and have been assigned OMB control number 2050-0041.

List of Subjects in 40 CFR Part 271

Hazardous materials, Indian lands, Reporting and recordkeeping requirements, Waste treatment and disposal, Water pollution control, Water supply, Intergovernmental relations, Penalties, and Confidential business information.

Dated: May 31, 1985

Lee M. Thomas,

Administrator.

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

For the reasons set out in the preamble, 40 CFR Part 271 is proposed to be amended as follows:

1. The authority for Part 271 continues to read as follows:

Authority: Sections 1006, 2002(a), and 3006, Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), and 6926).

2. In § 271.21, paragraphs (b) (2) through (4) are proposed to be revised to read as follows:

§ 271.21 [Amended]

* * * * *

(b) * * *

(2) The Administrator shall approve or disapprove program revisions based on the requirements of this part and of the Act. In approving or disapproving program revisions, the Administrator shall follow the procedures of paragraph (3) or (4) below.

(3) The procedures for an immediate final publication of the Administrator's decision are as follows:

(i) The Administrator shall issue public notice of this approval or disapproval of a State program revision:

(A) In the **Federal Register** as an immediate final rule;

(B) In enough of the largest newspapers in the State to attract Statewide attention; and

(C) By mailing to persons on the State agency mailing list and to any other persons whom the agency has reason to believe are interested.

(ii) A State program revision shall become effective 45 days after the date of publication in the **Federal Register** in accordance with paragraph (b)(3)(i) of this section, unless an adverse comment pertaining to the State revision discussed in the notice is received within 30 days after the date of publication. If an adverse comment is received, the Administrator shall so notify the State and the immediate final rule shall be withrawn and a proposed approval or denial of the revision shall be initiated in accordance with the procedures in paragraph (b)(4) of this section.

(4) The procedures for proposed and final publication of the Administrator's decision are as follows:

(i) The Administrator shall issue public notice of his proposed approval or disapproval of a State program revision:

(A) In the **Federal Register** as a proposed rule;

(B) In enough of the largest newspapers in the State to attract Statewide attention; and

(C) By mailing to persons on the State agency mailing list and to any other persons whom the agency has reason to believe are interested.

(ii) The public notice shall summarize the State program revision and provide for an opportunity to comment for a period of at least 30 days.

(iii) A State program revision shall become effective when the Administrator's final approval is published in the **Federal Register**.

FR Doc. 85–13745 Filed 6–7–85; 8:45 am]

BILLING CODE 6560–50–M

federal register

Monday
June 10, 1985

Part III

Department of Health and Human Services

Health Care Financing Administration

42 CFR Parts 405 and 412

Medicare Program; Changes to the Inpatient Prospective Payment System and Fiscal Year 1986 Rates; Proposed Rule

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

42 CFR Parts 405 and 412

[BERC-315-P]

Medicare Program; Changes to the Inpatient Hospital Prospective Payment System and Fiscal Year 1986 Rates

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

ACTION: Proposed rule.

SUMMARY: We are proposing to modify the Medicare inpatient hospital prospective payment system in order to implement necessary changes arising from experience with the system and from certain recommendations of the Prospective Payment Assessment Commission provided under section 1886(d)(4)(D) of the Social Security Act (the Act). In addition, this proposal sets forth our first adjustment of the diagnosis-related group weights and classifications as required under section 1886(d)(4)(C) of the Act.

In addition, in the addendum to this proposed rule, we are proposing changes in the methods, amounts, and factors necessary to determine prospective payment rates for Medicare inpatient hospital services. Changes proposed to the Federal portion of the payment would be applicable to discharges occurring on or after October 1, 1985. Proposed changes to the hospital specific portion would be effective with hospital cost reporting periods beginning on or after October 1, 1985. In effect, these changes would apply to the final year of the three-year transition period for the hospital prospective payment system. The addendum also sets forth our proposal for determining the rate-of-increase limits (target amounts) for hospitals excluded from the prospective payment system.

DATE: To be considered, comments must be mailed or delivered to the appropriate address, as provided below, and must be received by July 10, 1985.

ADDRESS: Address comments in writing to the following address:

Health Care Financing Administration, Department of Health and Human Services, Attention: BERC-315-P, 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, D.C.; or

Room 132, East High Rise Building, 6325 Security Boulevard, Baltimore, Maryland.

In commenting, please refer to file code BERC-315-P. Comments will be available for public inspection as they are received, beginning approximately three weeks after publication of this document, in Room 309-G of the Department's office at 200 Independence Ave., SW., Washington, D.C., on Monday through Friday of each week from 8:30 a.m. to 5:00 p.m. (phone: 202-245-7890).

FOR FURTHER INFORMATION CONTACT:

Linda Magno (301) 594-9343—DRG Recalibration, Hospital Wage Index, New Hospital Exemption from Rate of Increase, Payment for Cost Outliers, Referral Centers, Indirect Medical Education, Transfer Policy, Prospective Payment Rates, Excluded Hospitals

Thomas Hoyer (301) 594-9446—DRG Reclassification, GROUPER Program, Alcohol/Drug Hospitals and Units, Review Activities

SUPPLEMENTARY INFORMATION:

I. Background

A. Summary of the Implementation of the Prospective Payment System

Under section 1886(d) of the Social Security Act (the Act), enacted by the Social Security Amendments of 1983 (Pub. L. 98-21) on April 20, 1983, a prospective payment system for Medicare payment of inpatient hospital services 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 discharge. All discharges are classified according to a list of diagnosis-related groups (DRGs). This list currently contains 470 specific categories.

Section 1886(d)(1)(A) of the Act provides for a three-year transition period during which a declining portion of the total prospective payment rate is based on a hospital's historical cost in a given base year, and a gradually increasing portion is based on a Federal rate per discharge. The Federal rate is based in regional average standardized hospital costs in the first year, and a blend of a regional and national Federal rates per discharge in the second and third years. Beginning with the fourth year (that is, October 1, 1986), and continuing thereafter, the Federal portion of the payment for inpatient hospital services will be based entirely on national payment rates.

We published an interim final rule in the **Federal Register** (48 FR 39752) on September 1, 1983 to implement the prospective payment system effective with hospital cost reporting periods beginning on or after October 1, 1983. Technical corrections for that were issued on October 19, 1983 (48 FR 48467). In that rule, we established criteria for determining—

- Which hospitals are included in or excluded from the prospective payment system;
- The basis of payment under the prospective payment system;
- The prospective payment rate methodology;
- Additional payment amounts;
- Special treatment of certain hospitals; and
- Other conforming changes.

In particular, we identified the prospective payment rates to be used for the first year of the transition period. We issued a final rule (49 FR 234) on January 3, 1984 to make changes resulting from our consideration of public comments that were received in response to the interim final rule. Technical corrections for that rule were issued on June 1, 1984 (49 FR 23010).

As a result of our first year of experience with the prospective payment system and to accommodate changes resulting from the enactment of the Deficit Reduction Act of 1984 (Pub. L. 98-369) on July 18, 1984, we published a final rule on August 31, 1984 (49 FR 34728) that further revised the prospective payment regulations. In addition, in the addendum to that final rule, we made changes in the methods, amounts, and factors necessary to implement the second year of the payment transition period. Changes in the Federal rates were applicable to discharges occurring on or after October 1, 1984, while changes regarding the hospital specific portion of the payment were effective with hospital cost reporting periods beginning on or after October 1, 1984. Technical corrections on that final rule were issued on October 15, 1984 (49 FR 40167).

On March 29, 1985, we published a final rule (50 FR 12740) that redesignated the prospective payment regulations under a new 42 CFR Part 412. These regulations were previously located in 42 CFR 405.470 through 405.477.

B. Major Contents of This Proposed Rule

As stated above, this proposed rule would be effective for the third year of operation of the prospective payment system. For the first time, we are proposing to use updated data as the basis for classifying and weighting discharges and are considering the use

of new wage data. The proposed rule would incorporate, in both instances, more current data to replace 1981 data.

As part of our analysis of the most appropriate ways to accomplish the updating, we have been examining approaches that would permit updating the DRG weights or the wage index or both to reflect new data and methodological modifications while minimizing fluctuations in payments to particular hospitals. Examples of the type of approaches we have envisioned include retaining the use of 1981 data for certain factors, phasing in new factors over a two or three year period, combining or blending several data sources, or shifting to a moving average that would reflect the past several years of adjustment factors.

As discussed below and in sections II and III of this preamble, the more current data used in this proposed rule have somewhat different methodological and empirical bases than the DRG weighting factors and the wage index used in the first two years of the prospective payment system. The combination of newer data and modified methodology can be expected to produce somewhat more pronounced increases and decreases in Medicare payments for particular discharges in particular hospitals. As an alternative, updating the data without changing the underlying methodology (for example, shifting from the 1981 Bureau of Labor Statistics (BLS) wage index used in the first two years of the prospective payment system to the 1983 BLS wage index) would, on average, produce somewhat smaller reallocations than the survey-based wage index discussed below. We specifically solicit comments on the merits of these changes and on alternatives consistent with our other policy objectives and concerns.

1. *Changes to the DRG Classifications and Weighting Factors.* As required by section 1886(d)(4)(C) of the Act, we must adjust the classifications and weighting factors for discharges beginning with Federal fiscal year (FY) 1986. Our proposed changes are set forth in section II of this preamble.

2. *New Wage Index.* We are considering the use of a new wage index for purposes of adjusting for variations in area wage levels. This new wage index would be used both in standardizing hospital costs for purposes of determining the Federal rate and the DRG weights and for adjusting the Federal rate for purposes of determining prospective payments for hospitals. The new wage index is discussed in section III of this preamble.

3. *Regulations Changes.* In section IV of this preamble, we discuss several current provisions of the regulations in 42 CFR Parts 405 and 412, not discussed elsewhere in this rule, and set forth certain proposed changes concerning—

- Exemptions for new hospitals from the rate-of-increase limits;
- Payments for indirect costs of medical education;
- Limitations on charges to beneficiaries for hospitals paid under State cost control systems or demonstration projects;
- Payment for cost outliers; and
- Referral center adjustments.

We are also proposing several conforming changes to the regulations.

4. *Determining Prospective Payment Rates and Rate-of-Increase Limits.* In the addendum to this proposed rule, we set forth proposed changes to methods, amounts and factors for determining the FY 1986 prospective payment rates. We also are the proposing new target rate percentages for determining the rate-of-increase limits for FY 1986 for hospitals excluded from the prospective payment system.

5. *Impact Analysis.* In Appendix A, we set forth an analysis of the impact that the proposed changes described in this rule would have on affected entities.

6. *Discussion of Prospective Payment Assessment Commission Recommendations.* In section 1886(e)(2) of the Act, enacted by section 601(e) of Pub. L. 98-21, Congress provided for the establishment of 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 classification 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 section 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 Federal fiscal year (FY) 1986. These recommendations are due to the Secretary no later than the April 1 before the beginning of each fiscal year. The statute requires that ProPAC, in making its recommendations, take into account changes in the hospital market basket, 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.

Under section 1886(e)(5) of the Act, we are required to publish the report of the recommendations from ProPAC as a part of this proposed rule. Therefore, we are reprinting the ProPAC report as Appendix C of this document. The recommendations, and the actions we are proposing to take with regard to them (when an action is recommended), are discussed in detail in the appropriate sections of this preamble and in the addendum to this proposed rule. Those recommendations that are not specifically relevant to matters presented below are discussed in section V of this preamble. For the benefit of the reader and in order to provide some perspective on the overall nature of the ProPAC recommendations, we briefly summarize them here and indicate generally where they are discussed.

- *Update Factors:*

—Recommendation 1: Amount of the Update Factor. For FY 1986 the standardized amounts should be updated by the projected increase in the hospital market basket, minus a combined adjustment of one percentage point for productivity and scientific and technological advancement goals, plus an allowance for the estimated increase in real case-mix complexity during FY 1985. (Addendum, section II.A.)

- *Hospital Market Basket:*

—Recommendation 2: The Number of Market Baskets. For FY 1986, a single market basket should be continued for those hospitals subject to the prospective payment system. ProPAC plans to study the use of multiple market baskets by region and classes of hospitals within regions. (Preamble, section V.A.)

—Recommendation 3: Market Basket for Psychiatric, Rehabilitation, and Long-Term Care Hospitals. Separate market basket weights should be used for psychiatric, rehabilitation, and long-term care hospitals and related distinct-part units, which are excluded from the prospective payment system but subject to the rate of increase limits. Separate market basket weights need not be developed for children's hospitals. (Addendum, section III.C.)

—Recommendation 4: Market Basket Wage Component—Occupational Groups. The wage component of the market basket should be split into the following three categories, each with separate weights: managers and administrators, professionals and technicians, and other hospital workers. (Preamble, section V.A.)

—Recommendation 5: Employment Cost Index Feasibility Study. The Secretary should work with BLS to study the advantages and feasibility of developing an employment cost index

for the hospital industry that includes both public and private hospitals and covers increases in both wages and fringe benefits. (Preamble, section V.A.)

—Recommendation 6: Study Effects of Changes in the Minimum Wage Law on Hospital Workers. ProPAC plans to study the extent to which hospital workers would be affected by changes in the Federal minimum wage law. (Preamble, section V.A.)

—Recommendation 7: Correction of Market Basket Forecast Errors. The update factor should include a correction for substantial errors (that is, those errors that equal at least 0.25 of one percentage point) made in the previous year's forecast of changes in the external price measures used in the hospital market basket. (Addendum, section II.A.)

—Recommendation 8: Statutory Change for Forecast Error Correction. The Secretary should seek a statutory change that would provide that, beginning with fiscal year 1986, the update factor include a correction for market basket forecast errors. (Addendum, section II.A.)

—Recommendation 9: Rebasing of Market Basket Weights. Market basket weights should be rebased at least every five years in order to reflect the most current mix of inputs used by hospitals, and more frequently if significant changes in the weights occur. The market basket weights will also need to be rebased if payment for capital-related or direct medical education costs are included in the prospective payment rates. (Preamble, section V.A.)

• *Discretionary Adjustment Factors:*

—Recommendation 10: Allowance for Productivity and Scientific and Technological Advancement Goals. For the fiscal year 1986 prospective payment rates, the allowance for productivity and scientific and technological advancement goals included in the discretionary adjustment factor should be set at minus one percentage point. (Addendum, section II.A.)

—Recommendation 11: Adjustment for Case-Mix Change. Real changes in case mix should be reflected in the prospective payments to individual hospitals and in the aggregate. Changes in reported case mix that are unrelated to actual differences in the types of patients treated should not be a source of change. (Addendum, section II.A.)

—Recommendation 12: Update Factor for Exempt Hospitals. In addition to the projected increase in the market basket, hospitals and hospital distinct part units excluded from the prospective payment system should receive an adjustment of minus one percentage point in their fiscal year 1986 update factor for productivity improvement and technological and scientific advancement (Addendum, section III.C.)

• *Hospital Labor Market Areas—Area Wage Index:*

—Recommendation 13: Improvement of Labor Market Area Definitions. In order to better reflect hospital labor markets, the Secretary should, as soon as possible, revise the current definition of a hospital labor market area used to adjust the prospective payment rates for area wage differences to take into account variations in wages paid in the inner city compared to suburban areas within a metropolitan area, and variations paid in different rural locations within a state. (Preamble, section V.B.)

• *Disproportionate Share Hospitals:*

—Recommendation 14: Disproportionate Share Adjustment for FY 1986. The Secretary should develop a methodology for adjusting the prospective payment rates for hospitals that have a disproportionate share of low income and Medicare patients and implement the adjustment in FY 1986. The adjustment should be implemented so that it does not change aggregate payments. (Preamble, section V.C.)

—Recommendation 15: Definition of Disproportionate Share Hospitals. The Secretary should complete the development of a definition of a "disproportionate share hospital" in ample time to include adjustments for these hospitals in the FY 1986 prospective payment rates. The Secretary should consider broader definitions of low income than simply the percent of patients who are Medicaid recipients and should determine whether the share of Medicare Part A patients should be excluded from the definition. (Preamble, section V.C.)

• *Standardized Amounts:*

—Recommendation 16: Rebasing the Standardized Amounts. The standardized amounts used to determine hospital payments under the prospective payment system should be recalculated using cost data that reflect hospital behavior under that system. The results of this recalculation, with appropriate modifications, could be used to rebase the standardized amounts. Although recent cost data are not available to recalculate the standardized amounts for FY 1986, the Secretary should implement a process for timely collection of the cost data necessary for future recalculation. (Addendum, section II.A.)

• *DRG Classifications and Relative Weighting Factors:*

—Recommendation 17: Recalibrating the DRG Weights. For FY 1986, all DRG weights should be recalibrated using the 1984 Part A tape bills (PATBILL) data set. The newly recalibrated weights should be: (1) Normalized so that the average case weight is the same as it was at the beginning of FY 1985, thereby incorporating DRG weight adjustments made prior to the start of FY 1985; and (2) adjusted for any demonstrable changes in reported case mix occurring during FY 1985. (Preamble, section II.C.)

—Recommendation 18: Cardiac Pacemaker Implantation. The DRGs involving cardiac pacemakers, DRGs 115 through 118, should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981. ProPAC plans to continue studying this issue. (Preamble, section II.B.)

—Recommendation 19: Cataract Extraction and Intraocular Lens Implantation. DRG 39 (Lens Procedures) should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981, including the more frequent implantation of an intraocular lens following cataract removal. ProPAC will continue to monitor this issue. (Preamble, section II.B.)

—Recommendation 20: Percutaneous Transluminal Coronary Angioplasty. Cases in which percutaneous transluminal coronary angioplasty is the principal procedure should be removed from DRG 108 and temporarily assigned to DRG 112 prior to recalibration. The Secretary should immediately implement a mechanism to identify bills for cases in which this procedure is performed in order to provide data for analysis and additional adjustment as appropriate. (Preamble, section II.D.)

—Recommendation 21: No change Recommended for Bone Marrow Transplantation and Infective Endocarditis. ProPAC has examined bone marrow transplantation (DRGs 394 and 403) and treatment for infective endocarditis (DRG 126) and is recommending no changes in DRG classifications or weights at this time, other than those that would occur with recalibration. ProPAC will continue to gather data on this subject. (Preamble, section II.B.)

II. Proposed Changes to DRG Classifications and Weighting Factors

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 (comprised of a hospital-specific portion

and an urban or rural Federal portion adjusted for area wages) 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 national average resources per case for the average hospital. Thus, cases in a DRG with a weight of 2.0 would, on average, require twice as many resources as the average case for the average hospital.

Congress recognized that it would be necessary to recalculate periodically the DRG relative weights to account for changes in resource consumption. In addition, Congress provided the Secretary with authority to reclassify services and procedures within the DRG system to take into account changes in medical technology and treatment patterns. Accordingly, section 1886(d)(4)(C) of the Act requires that the Secretary adjust the DRG classifications and weighting factors effective for discharges occurring in FY 1986 and at least every four fiscal years thereafter. These adjustments are made to reflect changes in resource consumption, treatment patterns, technology, and any other factors that may change the relative use of hospital resources. The intention of Congress was that we would make changes as often as needed to achieve the objectives of the prospective payment system, including the need to keep current with developments in the areas of coverage and medical technology.

Below we set forth DRG reclassification and recalibration changes for discharges occurring on or after October 1, 1985. As discussed in section I.B. of this preamble, we solicit comments on the changes summarized below.

A. Basic Classification System

1. *General Background.* The method of classifying cases into DRGs for payment under the prospective payment system involves a number of steps. First, the physician indicates the principal diagnosis, as many as four additional diagnoses, and as many as three surgical procedures performed during the stay. This information is expressed by the hospital in the International Classification of Diseases, Ninth Edition, Clinical Modification (ICD-9-CM) codes and is reported to the hospital's fiscal intermediary on the hospital bill. Age, sex, and discharge status are also considered in assigning a case to a DRG.

The intermediary then enters the information in its claims system and subjects it to a series of automated screens called the Medicare Code Editor. These screens are designed to identify cases that require further review before classification into a DRG can be accomplished. During this process, cases such as the following are selected for further development:

- Cases that are obviously improperly coded (for example, diagnoses that are inappropriate to the sex of the patient).
- Cases that includes surgical procedures not covered under Medicare (for example, bilateral carotid body resection or cosmetic surgery).
- Cases that require more information (for example, all open biopsies are identified so that the intermediary can determine through development whether the case actually involved an open biopsy (a surgical DRG) or a closed biopsy (a nonsurgical DRG)).
- Cases with principal diagnoses that do not usually justify admission to the hospital (for example, wax in the ear).

After screening through the Medicare Code Editor and any further development of the claims, cases are classified by GROUPER into the appropriate DRG. The GROUPER program was developed as a means of classifying each case into the appropriate 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 establish the DRG weights and to classify current cases for payment.

2. *Operating Requirements of the DRG System.* During the initial operating period of the prospective payment system, we learned that the use of the DRG method of classification poses some operational challenges that we needed to address further. Operational experience and technological advances have led us to identify situations that require positive actions to resolve. These cases include the following:

- Cases that can be classified more accurately with revisions to GROUPER.
- Cases in which we discover that there are unintended omissions or inequities in the classification system (for example, mechanical or conceptual flaws).
- Cases in which a change in Medicare coverage requires assignment of a new item, service, or procedure to an existing DRG or to a new DRG, if necessary.

We believe that the necessity of maintaining a workable payment system requires that we have some latitude in establishing and updating the classification system (which, for that reason was exempted by Congress from judicial or administrative review (section 1886(d)(7) of the Act)). In the paragraphs below, we discuss our proposed process for making changes. Specifically, we discuss our proposed method for dealing with changes in our system of classification that, we believe, need to be made in order to correct problems or to recognize new coverage decisions that are made during the course of the Federal fiscal year (after the update notice for that year has been published).

3. *Proposed Changes to GROUPER.* We have identified a number of improvements to the classification system and have included them in a revised GROUPER program that we used to develop the recalibrated DRG weights published in the addendum to this proposed rule (Table 5). This GROUPER program would be used to classify and assign cases to DRGs effective with discharges occurring on or after October 1, 1985.

Although we have listed all the proposed changes made to GROUPER in Table 6 of the addendum to this document, a description of the general categories of changes we would make are as follows:

- *DRG Logic Issues and Technology Changes:* Experience has indicated that some GROUPER logic decisions could be improved and others should be corrected to reflect technological advances that have occurred since the development of the classification system. The following is an example of a logic problem. In Major Diagnostic Category (MDC) 5, the GROUPER logic results in the assignment to DRG 114 (Upper Limb and Toe Amputation for Circulatory System Disorders) of all cases in which a toe or upper limb was amputated, even if a lower limb was also amputated. Amputation of only a lower limb is classified in DRG 113 (Amputations for Circulatory System Disorders Except Upper Limb and Toe). Currently DRG 113 is weighted 2.6522 and DRG 114 is weighted 2.0848. The logic would be revised so that cases in which only an upper limb or toe is amputated would be placed in DRG 114 and all cases that involve lower limbs, either alone or with upper limbs, would be classified in DRG 113.

An example of a technology and coding problem relates to percutaneous transluminal coronary angioplasty. Coding rules have assigned this procedure to the ICD-9-CM code for removal of coronary artery obstruction; however, there is a tremendous difference between the two procedural techniques. Since percutaneous transluminal coronary angioplasty does not have a unique ICD-9-CM code, it cannot be separated easily from cases

that involve other procedures using the same code. Because these types of coronary angioplasties were not widely used and were not covered under Medicare at the time the DRG system was developed, no consideration was given to separating it from thoracotomies (major surgical procedures assigned to DRG 108 (Cardiothoracic Procedures, Except Valve and Coronary Bypass, With Pump), which has a weight of 4.3301). As a result, the advent of Medicare coverage and the increasing use of percutaneous transluminal coronary angioplasty has resulted in many cases involving this procedure being assigned by GROUPER to DRG 108. DRG 108 bears a weight appropriate to major surgery and is not, in fact, the medically appropriate assignment for percutaneous transluminal coronary angioplasty.

As noted in the summary of GROUPER changes in Table 6 of the addendum to this document, we would reassign this procedure to DRG 112 (Vascular Procedures Except Major Reconstruction), which currently has a weight of 2.3256. This DRG contains other procedures that are clinically suited to percutaneous transluminal coronary angioplasty and bears a weight that reflects the range of resources required for this procedure. Our decision is supported by ProPac's Recommendation 20, which recommends moving this procedure to DRG 112 for many of the same reasons that support our choice.

• *Operating Room versus Non-Operating Room Assignment:* The distinction between medical and surgical DRGs is meant to reflect the difference between cases that use operating rooms (a significant additional resource) and cases that do not. However, a few procedures that do not require the use of an operating room are recognized by GROUPER as operating room procedures. These procedures would be deleted from the list of procedures that could result in assignment to a surgical DRG. For example, code 8623, removal of nail, would be deleted from the list of surgical procedures. Therefore, this procedure alone would not result in assignment of a case to a surgical DRG or, if performed during a stay for an unrelated diagnoses, to DRG 468 (Unrelated Operating Room Procedures).

• *Complication and Comorbidity Membership:* In some cases, DRGs are listed in pairs, one with and one without complications or comorbidities, with a higher weight generally assigned to the DRG that includes complication or comorbidity. A number of additional diagnostic and procedural codes (mostly amputation codes) would be added to the list of complications and comorbidities. These changes would allow cases with these additional codes to be classified in DRGs that reflect the additional resources necessary to deal with complications or comorbidities.

• *Surgical Hierarchy Changes:* An examination of length of stay and charge data has led us to propose a reordering in the hierarchy of surgical procedures in a few cases. For example, surgical procedures in MDC 6 (Disease and Disorders of the Digestive System) would be reordered to assure that when several surgical procedures are present in a case in this MDC, the case would be assigned to the DRG within it that reflects the most resource intensive of the procedures.

• *DRG 468 Issues:* A number of MDCs and DRGs would be modified to include ICD–9–CM codes for surgical procedures that may be performed for diagnoses within them but that are not currently reflected in the particular MDC or DRG. Thus, cases in which these procedures are performed would be recognized by GROUPER and properly classified in the appropriate DRG rather than DRG 468, where they are currently classified.

In addition to these revisions, we are proposing a number of clarifying revisions in the documentation that describes how GROUPER works. Anyone interested in obtaining materials that reflect these changes may purchase revised GROUPER software and ICD–9–CM user manuals from:

Health Systems International, 100 Broadway, New Haven, Connecticut 06511.

These materials should be available after publication of the final rule, when all the changes we have discussed have been incorporated into the program. As mentioned above, a listing of the changes also appears in Table 6 at the addendum to this document.

B. Reclassification of DRGs

In addition to the changes already incorporated into the GROUPER program, we are proposing to make changes in the DRG classification system for alcohol and drug abuse DRGs, certain major joint procedures, and kidney transplants for diabetic patients. These changes would be effective for discharges occurring on or after October 1, 1985. We believe that these changes would improve the accuracy of the classification system and, along with the use of FY 1984 claims data, would result in the establishment of more accurate weights. These changes should also strengthen the relationship between the consumption of resources in the cases whose assignments are affected by these changes and the payments made for these cases. These further changes would be incorporated into the GROUPER program by the time we establish the weights that we will publish in the final rule so that our future payments would reflect these changes. These changes are discussed in greater detail below.

ProPAC, in its Recommendations 18, 19, and 21, advised that the following DRGs should not be revised except to the extent that they are recalibrated as are all the other DRGs.

• DRGs 115 through 118, which involve cardiac pacemakers.

• DRG 39, Lens Procedures.

• DRG 126, Acute and Subacute Endocarditis.

• DRGs 394 and 403, which involve bone marrow transplantation.

We agree with ProPAC and have followed its recommendations with respect to these DRGs.

1. *Alcohol and Drug Abuse DRGs.* In the January 3, 1984 final rule on the prospective payment system, we excluded alcohol/drug treatment hospitals and units from the prospective payment system in response to criticism we received concerning the alcohol and drug abuse DRGs (49 FR 241). In that document, we specified that the exclusion would be permitted only until October 1, 1985, and that after that date we intended to include an adjustment to the DRG classification system that would permit prospective payment to be made appropriately for alcohol/drug treatment services. (See section IV of this preamble for a further discussion of the expiration date of this exclusion.)

The specific DRGs that are being considered in this section are the DRGs within MDC 20 (Substance Use and Substance Induced Organic Mental Disorders); that is DRGs 433 through 438. Commenters had claimed that the current weights do not differentiate between rehabilitation and detoxification. In order to investigate this assertion, we issued an instruction to all providers that, effective May 15, 1984, all claims submitted for treatment of alcohol and drug disorders are to be coded to indicate whether detoxification or rehabilitation, or both services, were provided to patients whose claims were classified within DRGs 433 through 438. We analyzed provider claims for inpatient services concerning these disorders after this coding requirement was added, and found that there are significant differences in resource

consumption depending upon whether or not substance dependent patients received detoxification, rehabilitation, or a combination of these services.

In order to properly reclassify these DRGs, we consulted with medical experts of the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA), the National Institute on Alcohol Abuse and Alcoholism (NIAAA), and the National Institute of Mental Health. The following is our proposed reclassification of the substance abuse DRGs within MDC 20 (Substance Use and Substance Induced Organic Mental Disorders):

- DRG 433—Substance Use and Substance Induced Organic Mental Disorders, Left Against Medical Advice.
- DRG 434—Substance Abuse, Intoxication, or Induced Mental Syndrome Except Dependence.
- DRG 435—Substance Dependence, Detoxification and/or other Symptomatic Treatment.
- DRG 436-Substance Dependence, Rehabilitation Therapy.
- DRG 437-Substance Dependence, Combined Rehabilitation and Detoxification Therapy.

This classification is based on two clinical assumptions that are supported by our medical consultants at ADAMHA and NIAAA. Detoxification and rehabilitation therapies are similar regardless of whether alcohol or other drugs are the cause of dependence. For these reasons, the classification of "substance dependence" that combines both alcohol and drug dependence makes the most clinical sense if treatment modalities are considered. The second clinical consideration is that only those patients who are dependent on alcohol or other drugs require detoxification or rehabilitation therapy as these terms are used in our classification.

The case composition of DRG 433 remains unchanged. Proposed DRG 434 contains those cases currently classified in DRG 435 (Drug Use Except Dependence) and DRG 437 (Alcohol Use Except Dependence) and those cases in DRG 438 (Alcohol and Substance Induced Organic Mental Syndrome) except the cases that indicate substance dependence (that is, codes 2910, 2913, 2918, 2919, 2920, 30300, 30301, 30302, 30303, and 30390). Proposed DRGs 435, 436, and 437 contain all those cases currently classified in DRG 434 (Drug Dependence), DRG 436 (Alcohol Dependence) and those cases in DRG 438 that indicate substance dependencies (that is, codes 2910, 2913, 2918, 2919, 2920, 30300, 30301, 30302, 30303, and 30390).

Of this group, those cases of substance dependence in which detoxification or other symptomatic treatment is provided would be classified into proposed DRG 435. Those cases of substance dependence in which rehabilitation treatment is provided would be classified into proposed DRG 436. Those cases of substance dependence in which combined detoxification and rehabilitation therapy is provided would be classified into proposed DRG 437.

In studying the appropriateness of the proposed reconfiguration of the DRGs in MDC 20, we focused on those cases from each hospital with discharge dates occurring after the date the hospital first complied with the May 15 coding instructions. This sample consisted of 5,577 cases from 1,112 different providers nationwide. The relative mix of different institutions (for example, alcohol units, alcohol institutions, general hospitals, psychiatric hospitals and units) represented was approximately proportional to the general mix of provider institutions nationally. A comparison of these data with the larger data set used for recalibration indicated that almost identical relative weights would be obtained from either data set. Hence, in order to treat the DRGs in MDC 20 consistently with other DRGs, the larger recalibration data set was used in deriving the relative weights contained in Table 5 of section IV of the addendum to this rule.

We are proposing to implement this new classification of the DRGs within MDC 20. Alcohol/drug hospitals and units that are currently excluded would be included in the prospective payment period beginning with the first day of a hospital's or unit's cost reporting period that begins on or after October 1, 1985. We recognize that ProPAC's report indicates that this is an issue that requires further study, but we believe that the data we have been able to examine in the past few months do provide a sound basis for making this change at this time.

We believe that these new DRGs provide a better means of distinguishing the many cases in which substance abuse or misuse and other symptoms result in hospitalization and cases in which substance dependence requires both detoxification and rehabilitation. We now have coverage rules in place that clearly describe covered detoxification and rehabilitation care and have already furnished them to the Utilization and Quality Control Peer Review Organizations (PROs). We recognize that these new DRGs will need to be carefully monitored to assure that cases are being properly coded and intend to instruct the PROs to pay special attention to them in admission review and in the course of DRG validation.

2. *Major Joint Procedures (DRG 209).* Hospitals, physicians, and professional societies allege that our current DRG 209 creates a disincentive for performing more than one medically-appropriate major joint procedure of the lower extremity during the same hospital stay. We have learned that some patients may be undergoing two separate hospitalizations when, in fact, the performance of both joint replacements during the same hospital stay might be more appropriate medically. This disincentive results from the high cost of each artificial joint prosthesis as well as the differing clinical course of patients who require this surgery and the nature of the postoperative rehabilitation process associated with lower extremity joint replacement.

Based on consultation with various professional organizations and individual physicians, including the American Academy of Orthopaedic Surgeons and the American College of Surgeons, we conducted a review of all Medicare claims in our 1984 Part A tape bills (PATBILL) file through September 1984 for DRG 209. Our claims data contained 653 cases of bilateral or multiple major joint procedures of the lower extremity including 450 bilateral knee replacements and 203 bilateral hip replacements. They were significantly more resource intensive than single unilateral lower extremity joint replacements. Therefore, for discharges occurring on or after October 1, 1985, we propose to create a DRG for bilateral or multiple major joint procedures of the lower extremity.

We have identified certain combinations of major joint procedures within DRG 209 that may both be performed during the same hospital stay. Each of these procedures requires the implantation of a separate prosthesis. If any two of the listed procedures are performed during the same hospital stay, they would be assigned to a new DRG that contains only those cases in which two major joint procedures, each requiring a separate prosthesis, were performed. Proposed DRG 471 (Bilateral or Multiple Major Joint Procedures of the Lower Extremity) would contain the following codes: 8141, 8148, 8151, 8159, 8161, 8162, 8163, and 8164.

The original composition of DRG 209 would remain unchanged except that all cases indicating the performance of two major joint procedures during the same

admission would be moved to the new DRG 471 representing multiple major joint procedure of the lower extremity. We expect that this process would reduce any economic incentive to perform major joint procedures in two separate admissions instead of during a single hospital stay if it is medically appropriate for the patient.

ProPAC's report indicated that the data available to it at the time the report was issued were not adequate to support a recommendation. However, we have made the change because our study of Medicare claims data enables us to make an adequate distinction between single and multiple cases. As in all cases, we intend to continue to monitor the resource intensity of multiple and single major joint procedures to assure ourselves that this classification remains appropriate.

3. *Kidney Transplants for Diabetic Patients.* We have learned that an anomaly in the ICD–9–CM coding conventions leads to the classification into DRG 468 of diabetic patients with end stage renal disease (ESRD) who receive kidney transplants. Because these cases obviously require the range of resources and the clinical services described for DRG 302 (Kidney Transplant), which currently has a weight of 4.1640, we propose to change the GROUPER program so that diabetic ESRD patients who receive kidney transplants would be properly classified into DRG 302.

C. Recalibration of DRG Weights

The DRG weights currently used in the prospective payment system are based on operating cost information from hospitals' 1981 cost reports as well as patient characteristics, diagnoses, and charge data from the 1981 Medicare provider analysis and review (MEDPAR) file. The MEDPAR file contains inpatient hospital billing records, coded to indicate principal diagnosis, presence or absence of a secondary diagnosis, and one surgical procedure, for a 20-percent sample of Medicare beneficiaries.

The DRG weights were calculated by a methodology involving both cost and charge data. Each case in the MEDPAR file was assigned to a DRG. Then, the average cost per day for routine and special care days for a hospital (adjusted to remove medical education costs and capital-related costs) was multiplied by the number of routine and special care days, respectively, for each discharge in the DRG. In order to derive ancillary costs associated with each discharge, ancillary cost-to-charge ratios for the ancillary cost departments from the cost report data were multiplied by the ancillary charges from the MEDPAR file. The resultant ancillary costs were adjusted to remove an estimate of direct medical education and capital-related costs.

The sum of the routine, special care, and ancillary costs was adjusted for indirect medical education costs, wage differences, and, in Alaskan and Hawaiian hispitals, cost-of-living differences. Cases were eliminated if the cost was greater or less than 3.0 standard deviations from the mean of the logarithmic distribution of the cost per case for a DRG. The average standardized operating cost for each DRG was then divided by the national average operating cost per case for the average hospital to arrive at the DRG relative weight.

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. It is possible that we could continue to develop cost-based weights using cost data or a combination of cost and charge data. Alternatively, the relative weights could be based solely on hospital charge information, adjusted or unadjusted for capital costs, teaching, and wage costs. Extensive and recent charge information is available from the FY 1984 PATBILL data set. Effective October 1, 1983, PATBILL contains fully coded inpatient hospital bills for 100 percent of Part A beneficiaries (MEDPAR is a 20 percent sample).

There are three significant advantages to using FY 1984 PATBILL information to develop new relative weights:

- Only if we use these data will we be able to classify cases more accurately than was possible in constructing the current weights. The reason is that FY 1984 PATBILL data contain more detailed information on diagnoses, procedures, age, and discharge destination than does MEDPAR.
- Since FY 1984 PATBILL data are derived from 100 percent of FY 1984 Medicare hospital discharges, the weights will be more reliable for all DRGs. Thus, we will be able to reduce significantly the number of low-volume and empty DRGs compared to what is possible using MEDPAR.
- FY 1984 PATBILL data are the most recent data, and therefore are more reflective of current treatment patterns than is MEDPAR.

We believe that these factors consititute a strong case in favor of using FY 1984 PATBILL data for the FY 1986 recalibration.

However, we have also been considering combining FY 1984 PATBILL data with the latest Medicare cost report data. Our most recent cost report data cover periods prior to October 1982. Therefore, the development of cost weights using FY 1984 PATBILL data would require combining cost and charge data from different periods of time. Since the hospital environment has changed significantly in the two or three years involved, we believe that that approach might make the weights less accurate than the use of charges alone.

In order to determine if DRG relative weights based on charges can accurately reflect the relative resource consumption across DRGs, we conducted a study (described below) that compared relative DRG weights computed based on 1981 costs with those computed on 1981 charges.

1. *Analysis of Charge Information.* Charge-based relative weights were calculated exclusively from 1981 MEDPAR information using essentially the same methodology used to calculate the 1981 cost-based weights. The charge-based weights were restricted to the same 358 DRGs for which the 1981 MEDPAR file contains a sufficient number of cases to yield reliable weights. These charge-based weights were then compared to a set of cost-based weights. The only difference between this comparison set of cost-based weights and the weights published in the original September 1, 1983 interim final rule is that these were not renormalized to accommodate external data for the remaining 109 DRGs.

In computing the charge-based weights, we used the same assumptions and procedures as were used in computing the cost-based weights except that capital-related expenses and medical education costs (direct and indirect) were removed from the cost-based weights but not from the charge-based weights.

We found a high degree of similarity between the cost-based weights and the weights based on 1981 charges for the 358 DRGs that were included in the analysis. The difference in the two sets of weights is less than five percent for most DRGs. In addition, the structure of the relative weights across DRGs for each method is also very similar. The Spearman correlation coefficient, which measures the correspondence of the rank ordering of pairs of observations, and the Pearson product moment correlation coefficient, which measures the correspondence of actual values between two sets of observations, are both greater than .99. These results reflect a high degree of correspondence

between the cost-based and charge-based weights.

Based on the results of this analysis, we believe that for this recalibration DRG weights based on charge data would provide an accurate measure of the relative resource consumption across DRGs. In addition, the recalibration of DRG weights based on charge data would permit the use of recent billing data that include case experience under the first year of the prospective payment system. Therefore, at this time, DRG weights based on charges should be more reflective of current technology and treatment patterns. However, we will continue to study this issue and may consider other options as we refine our analysis and in future recalibration efforts.

Recalibration based on charge data is supported by ProPAC's Recommendation 17. ProPAC concludes that, at the present time, charge data are the most recent and detailed data we have available.

2. *Recalibration of DRGs Based on Charge Data.* The recalibrated DRG relative weights were constructed from FY 1984 PATBILL data received by HCFA through December 1984, which contain almost 90 percent of all Medicare discharges occurring in FY 1984, the first year of the prospective payment system. Approximately 40 percent of these discharges were paid under the prospective payment system, and 60 percent on a reasonable cost basis under the rate of increase limits and State demonstration waivers. The PATBILL data include approximately 10.2 million Medicare discharges.

The methodology used to calculate the DRG weights is as follows:

- All the claims were reclassified using the proposed revised GROUPER program.
- The average charge per DRG was calculated by summing the total 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 charges per case for each DRG were eliminated from the calculation of the average charge per DRG.
- The average charge for each DRG was then recomputed excluding the statistical outliers and divided by the national average charge per case for the average hospital to determine the weighting factor.
- No adjustments were made to the charges to remove capital-related and medical education costs. However, the charges were standardized for wage differences using the proposed survey-based wage index and for variations in teaching activity.
- Kidney acquisition costs continue to be paid on a reasonable cost basis, but, unlike other excluded costs, kidney acquisition costs are concentrated in a single DRG (DRG 302, Kidney Transplantation). For this reason, it was necessary to make an adjustment to prevent distortion of the relative weight for DRG 302. Kidney acquisition charges were subtracted from the total charges for each case in DRG 302 prior to computing the average charge for the DRG and prior to eliminating statistical outliers.

The weights developed according to the methodology described above were normalized so that the average case weight after recalibration is equal to the average case weight prior to recalibration. This normalization is supported in general by ProPAC's Recommendation 17. ProPAC recommended that this method be used to incorporate DRG weight adjustments made before the start of FY 1985. (See section II. A.3.a. of the addendum for further discussion of Recommendation 17 concerning adjustments for case mix.)

3. *Low Volume and Empty DRGs.* As discussed above, we used data from the 1981 MEDPAR file and 1981 Medicare cost reports to establish the current set of DRG relative weights. However, there were 109 DRGs that either contained no MEDPAR cases or had too few cases to provide a reliable weighting factor. In order to construct a full set of relative weights, we supplemented the MEDPAR file with discharge records from Michigan and Maryland. The combined data sets were then used to calculate the weighting factors for the 109 low volume or empty DRGs.

By using the 1984 PATBILL data set, which contains the entire universe of fully coded Medicare claims, rather than the MEDPAR file, which is a 20 percent sample of claims, the number of low volume and empty DRGs is greatly reduced. In addition, sampling error is no longer a concern, which means that, in theory, a DRG weight could be constructed from a single case. In practice, however, we believe that some minimum number of cases is required to compute reasonable weights. We considered using minimum numbers of cases that ranged from 1 to 50 cases. We are proposing to use a minimum of 10 cases because we believe this to be a reasonable threshold.

In computing weights for the low volume and empty DRGs, we could repeat the process used for the original weighting; that is, using non-Medicare data for other sources. This option is extremely time consuming and complex since it involves obtaining raw data from outside sources and performing extensive data processing to edit and standardize data, compute weights for each data set, and merge those weights with Medicare-based weights. Because this method essentially uses non-Medicare claims to set weights for the Medicare population (and those populations differ in some significant ways), it is not clear how meaningful the results are for our purposes. Therefore, although it was reasonable to use this method for the first weighting, we do not believe it should be repeated because use of the FY 1984 PATBILL data results in a reduction in the number of low volume DRGs from 109 to 30.

We decided to adjust the original weights of the 30 low volume and empty DRGs that would still be present after our proposed recalibration by the percent change in the weight of the average case in the remaining DRGs. Therefore, we would adjust the original weights of the DRGs involved downward by three percent. However, the renormalization of the entire set of relative weights involves adjusting the weights upward by three percent. The combined effect of these adjustments on the 30 low volume and empty DRGs is to leave their relative weights unchanged.

The DRG weights established in this manner for low volume DRGs are appropriate for Medicare discharges, especially in view of the fact that, among the over 10 million Medicare discharges, only 50 discharges were classified into these DRGs. However, State Medicaid agencies and other payors of health care services that may be interested in using a hospital prospective payment system should recognize that DRG classifications and weights developed from Medicare discharges may not be appropriate for use in the payment of non-Medicare cases. For example, if patient populations other than the Medicare population are involved, diseases such as cystic fibrosis may be weighted differently. This is particularly true in the case of low volume DRGS, many of which are for pediatric diagnoses, which are rare among Medicare beneficiaries. Therefore, other payors interested in using the DRG classification system may wish to develop DRG groupings and weights for these types of diagnoses using data more appropriate to their respective beneficiary populations.

D. Procedures for Making Changes During the Year

We plan to make most of the changes we would want to make in the GROUPER program or the DRG classification system at the same time we publish the annual prospective payment rate notices required by § 412.8(b) in order to make the system as predictable as possible during the year. However, as we have noted, we believe that this interest may occasionally be overridden by the need to make certain changes on a more current basis to—

- Account for new items and procedures that become covered under Medicare during the course of the year; and
- Correct omissions or inequities that have a potentially adverse impact on beneficiaries or a significant and unwarranted fiscal impact on the system.

The process by which the need for the changes and the nature of the changes to be made are identified will vary to some extent with the nature of a particular issue. However, we have described below the general process we propose to follow in developing the issues, as well as the procedures we would use for implementing the changes. These procedures would be set forth in a new § 412.10.

1. *New Coverage Decisions.* A decision to provide Medicare coverage of a new item or procedure must, in the interest of fairness to beneficiaries and hospitals, be accompanied promptly by a decision on the appropriate DRG classification of cases including the newly covered item or procedure. In some cases, we may need to establish a new DRG in order to accommodate the new coverage decision.

We have an established process by which we deal with proposals to change coverage under the Medicare program. This process includes review of the issues by a panel of HCFA physicians and, in some cases, referral to the Public Health Service for a recommendation if additional medical expertise is required. We plan to maintain this process and to supplement it, once medical advice is received, by the procedures described below in this section. Individuals and organizations wishing to recommend expansion of coverage to inclued new items or services should continue to follow existing practices.

In making a decision as to payment for newly covered items or procedures under the prospective payment system, we propose to use the clinical, cost, and charge data available to us at the time. In deciding how to assign a new item or procedure to a DRG, create a new DRG, or alter the weight of an existing DRG, we propose to follow the same principles that governed the development of the original DRG system; that is, the cases must have clinical coherence and a relatively similar resource intensity.

2. *Coding Issues.* A new procedure may need to have an ICD–9–CM code assigned to it, and there may be some dispute as to which code is appropriate or there may be no appropriate code. HCFA is working with the National Center for Health Statistics (which is responsible for ICD–9–CM), the American Hospital Association, the American Medical Records Association, and the Commission on Professional and Hospital Activities to establish a task force to deal with these issues. Decisions about coding would be announced by HCFA to all appropriate parties through its issuance system.

3. *Omissions and Inequities.* We may identify cases in which the GROUPER logic works unintended inequities that because of their magnitude require immediate correction. For example, as mentioned earlier, kidney transplants are normally classified into DRG 302 (Kidney Transplant), which has a weight of 4.1840; however, because of an ICD–9–CM coding convention, certain diabetic ESRD patients who are admitted with a principal diagnosis related to diabetes with renal manifestation and who receive a kidney transplant are assigned to DRG 468 (Unrelated Operating Room Procedure), which has a weight of 2.0818.

With one exception, which is described below, we have not corrected this problem or made any significant DRG classification changes until now because we had not stated in previous documents that we would make changes outside of the recalibration and reclassification effort prescribed by section 1886(d)(4)(C) of the Act. However, we believe that when we identify cases such as these, which have a major fiscal impact, it is appropriate to deal with them as soon as possible after they are discovered so that appropriate levels of payment would be made. The one change we have made already is to add coverage for two types of lithotripsy procedures so that Medicare beneficiaries could benefit from the procedures and hospitals could be paid for them. In the case of these procedures, it was possible to incorporate them into the system by identifying the appropriate DRG and assigning an appropriate code.

If the GROUPER program is not capable of assigning cases to the DRG that we have found to be appropriate, the Medicare Code Editor or manual claims review may be considered for use in the interim until GROUPER changes can be made.

We are including below a full discussion of the process by which we determined how to make the lithotripsy change as a example of the approach we plan to take with interim changes. Of course, our decision is subject to comment at this time.

- Extracorporeal Shock Wave Lithotripsy: Extracorporeal shock wave lithotripsy is a new medical technology that permits noninvasive treatment of kidney stones by the nonsurgical fragmentation of stones with focused hydraulic shock waves. We have recently provided Medicare coverage of the treatment of upper urinary tract stones by extracorporeal shock wave lithotripsy. Our decision to provide coverage was based on the recommendations of the Office of Health Technology Assessment of the Public Health Service (PHS), which determined that this treatment is safe and effective for upper urinary tract stones. Our decisions on DRG placement and coding were based on a thorough study of the information available.

Included in our studies were surveys of hospital resource consumption, charges, cost estimates, and characteristics of patients of each of the six medical centers currently performing extracorporeal shock wave lithotripsy. Information based on over 2,000 cases (for procedures performed during trials for Food and Drug Administration premarketing approval) was obtained from the University of Virginia Hospitals, Charlottesville; Cornell University Medical Center, New York Hospital; Massachusetts General Hospital, Boston; Shands Hospital of the University of Florida, Gainesville; Baylor University Medical Center, Houston; and Methodist Hospital, Indianapolis.

Our medical record consultants informed us that ICD–9–CM code 5995 is the most appropriate existing code for extracorporeal shock wave lithotripsy. This code should be used when submitting claims for this procedure. We are proposing to continue this classification, which causes the procedure to be grouped into DRGs 323 and 324 (Urinary Stones).

However, as in all cases, we intend to continue to monitor the resource intensity of extracorporeal shock wave lithotripsy to assure ourselves that this classification remains appropriate.

- *Percutaneous Lithotripsy:* Percutaneous lithotripsy is a method by which urinary stones are fragmented and removed through a small surgically

created passage between the urinary tract and the overlying skin. This is often accomplished by a surgical procedure called a nephrostomy.

We have recently extended Medicare coverage to the treatment of certain urinary stones by percutaneous lithotripsy. Our decision again was based on the findings of PHS that percutaneous lithotripsy is considered safe and effective treatment for certain urinary tract stones. Effective March 15, 1985, we implemented a coverage instruction allowing payment for percutaneous lithotripsy.

Although ultrasonic fragmentation of kidney stones is not recognized as an operating room procedure within GROUPER, this procedure is often performed in conjunction with standard surgical procedures such as a nephrostomy. If these standard surgical procedures are performed during the same hospitalization as an adjunct to the lithotripsy, and are appropriately coded, GROUPER assigns the case to the associated surgical procedure (for example, DRG 304 or 305 for nephrostomy). If no recognized operating room procedure is performed during the same hospitalization as the one in which the lithotripsy is performed, then the case is assigned to DRG 323 or 324 (Urinary Stones). This situation should occur rarely, such as those cases in which lithotripsy is performed through a patient nephrostomy that existed at the time of admission. We believe that these DRG assignments continue to be appropriate for percutaneous lithotripsy.

ProPAC's report recommended deferring action on this issue. However, since this report was issued, we received the recommendation from PHS indicating that this procedure was safe and effective for the applications for which coverage is being extended. Also, we believe that the reasons discussed above fully support the DRG assignment that will be made.

We recognize that our proposal on making changes during the year avoids the rulemaking process and a full discussion of the issues relating to the changes, as well as opportunity for public comment. We believe, however, that our decision to make limited changes in this way is consistent with the view of Congress, which exempted the establishment, methodology, and weighting of diagnosis related groups from judicial review because of their complexity and " * * * the necessity of maintaining a workable payment system." (H.R. Rep. 25, 98th Cong., 1st Sess. 143 (1983).) It is our intent, nonetheless, to correct any errors we may have made as soon as possible and to submit all changes we have made during the year, as well as changes we propose to make during the next year, for comment in the next annual update notice.

Interim changes would be made by means of HCFA's administrative issuance system and would be made effective as soon as is operationally feasible. While we would not delay the implementation of these changes, any information we receive would be considered in determining whether further interim changes should be made.

We would stress, however, that we anticipate few changes would be made during the year. It is necessary to include newly covered items and services as soon as possible so that beneficiaries are protected from liability for them as provided under § 412.42. It is also necessary to make changes when an omission or inequity is discovered which inappropriately disadvantages either the beneficiaries, the hospitals, or the Medicare Trust Fund. For example, we would have preferred to make the change relating to diabetic patients who require kidney transplants (described above) as soon as possible to avoid disadvantage to the patients or providers.

Our approach to these issues reflects our agreements with ProPAC, which suggested a similar approach with respect to percutaneous transluminal coronary angioplasty. The inequity, which in this case was to the Medicare program, resulted because the relative novelty of the procedure at the time the DRG system was developed caused it to be overlooked and the ICD–9–CM code assigned to it caused it to be grouped inappropriately with open heart surgery.

Recommendation 20 from the ProPAC report states that in the case of percutaneous transluminal coronary angioplasty, we should immidiately implement a mechanism to correct the problem and follow-up with a formal change in GROUPER. ProPAC's rationale was that the classification was so clearly inappropriate from both a medical and resource standpoint that an immediate change was warranted. As we have noted, we have not yet made these changes because we believe that a prior notice of our intentions to establish a process for interim changes should be given. However, in the future, for issues such as these, we plan to follow the advice of ProPAC and make changes at the point that the need for change becomes apparent.

While we expect to makle changes during the year infrequently, we believe that situations such as the ones described above warrant this type of action. We recognize that in some cases, some members of the provider community may face a reduction in payment (as would have been the case in the event of a midyear percutaneous transluminal coronary angioplasty change). In other cases, an increase in payment would result (for example, the case of kidney transplants provided to diabetic patients). However, we believe that it is necessary to make corrections and modifications during the year in order to correct anomalous situations or to pay for new procedures. These changes are necessary to assure that proper payment is made and that the diffusion of new and improved medical practices and technology are not retarded by this payment system and that the system remains current.

III. Development of a New Hospital Wage Index

A. Basis of Proposed Wage Index

Section 1886(d)(2)(C)(ii) of the Act requires that we standardize the average cost per case of each hospital used to develop the separate urban and rural standard amounts for differences in area wage levels. Section 1886(d)(2)(H) of the Act requires that the standardized urban and rural amounts for the nine census regions and the national rates be adjusted for hospital area wage levels as part of the methodology for determining the prospective payments to hospitals.

We used calendar year 1981 hospital wage and employment data obtained from BLS's ES 202 Employment, Wages and Contributions file for hospital workers to construct the wage index, applied under both of the above provisions of the Act, for computing prospective payments to hospitals during FY 1984 and FY 1985. The BLS ES 202 system compiles information on employment and total wages for workers covered by unemployment insurance.

We have been aware since the beginning of the prospective payment system of certain limitations of the BLS data, especially with regard to the lack of information on hours of employment or full-time equivalents. The BLS data provide information only on the number of workers employed at a hospital and their aggregate salaries. As a result, area wage indexes produced from these data do not distinguish between part-time and full-time employees. Although we recognized these shortcomings, we believed the disadvantages were outweighed by the advantage of being able to utilize the best national data available.

In response to the September 1, 1983 interim final rule (48 FR 39752), we received many comments concerning the nature and potential impact of limitations in the BLS data. The commenters believed that using these data to construct the hospital wage index resulted in inaccurate and improper geographic variation in prospective payment rates. Because the area wage index can have a substantial impact on the amount of a hospital's payment, the accuracy of the index values is essential. We concluded from these comments that we needed to examine critically those limitations in the wage index that seemed of greatest concern in order to ensure the accuracy of the payment rates and, thereby, to maintain confidence in the equity of the prospective payment system. For this reason, we established a joint workgroup with representatives of the hospital industry from across the country to evaluate alternatives to the current wage index.

This workgroup agreed that the most serious technical limitation of the BLS data was its inability to take into account differing part-time employment practices. The workgroup decided that this problem should be addressed immediately, and to correct this limitation, it was decided that we would collect our own data through a survey of hospitals subject to the prospective payment system. We devised a survey form and instructions for collecting financial data that would permit the analysis of options for the construction of an improved wage index.

This survey provided for the extraction of specific hospital salary and fringe benefit data from the Medicare cost report for hospital fiscal years ending in calendar year 1982, and for the extraction from hospital records of data on paid hours worked. These survey forms were disseminated through the Medicare fiscal intermediaries on March 16, 1984. A complete description of the survey, as well as the initial survey results, can be found in the proposed rule published on July 3, 1984 (49 FR 27439) and the final rule published on August 31, 1984 (49 FR 34764).

It was our intention to use the information from this survey to calculate a new wage index for the FY 1985 prospective payment rates. However, as explained in the July 3, 1984 proposed rule, we were unable to implement a new wage index developed from the survey because a high proportion of the survey reports as submitted by hospitals were either incorrect or otherwise suspect as to their accuracy. Therefore, the prospective payment rates for FY 1985 were developed from the same 1981 BLS wage indexes previously published on September 1, 1983 (48 FR 39871), updated to reflect the most recent corrections in the 1981 ES 202 data and changes in metropolitan area definitions.

As of December 12, 1984, we had received survey reports from 5,734 non-Federal hospitals. Of these reports, 94 represented data from hospitals that are currently not subject to the prospective payment system (that is, psychiatric, rehabilitation, cancer, and long-term hospitals). These data were excluded from the survey data base. Also, we excluded data from seven hospitals that had changed ownership in 1982 or later and for which validated data could not be obtained. Thirty-eight additional hospitals were excluded because of technical deficiencies in their data. Therefore, records from 5,595 hospitals were included in our survey data base.

As a further check on the accuracy of the reported survey data, we, in conjunction with the Department's Office of the Inspector General, initiated a limited scope audit of the data from a number of surveyed hospitals. This audit was used to verify the key data elements from the survey reports that are used in the computation of the proposed wage index. Approximately two-thirds of the survey reports audited were from hospitals that are located in areas where our analysis indicated that the application of the HCFA gross wage index would have resulted in FY 1984 prospective payment rates per discharge that varied by more than ten percent from payment rates using the BLS wage index. As expected, the greatest number of, as well as most significant, audit adjustments were made to the survey data from hospitals located in the aberrant areas. The corrected records were incorporated into the survey data base.

B. Computation of Proposed Survey-Based Wage Index

We computed two hospital wage indexes using the data from the 5,595 hospitals remaining in the survey data base. One index is derived from gross hospital salaries; the second index is developed from adjusted gross hospital salaries. Adjusted gross salaries are defined as the net of wages for and hours worked by contracted labor, interns and residents, personnel employed in nonhospital cost centers, and hospital-based physicians.

The two indexes were developed from different categories of hospital workers. the index based on gross salaries and wages measures the difference from area to area in gross hospital wages; that is, the wages paid to all hospital workers, including contract labor, interns and residents, provider-based physicians, and workers employed by the hospital but working in areas of the facility other than the hospital inpatient area. The other index is based on adjusted salaries and hours; that is, it eliminates the effect of contract labor, interns and residents, provider-based physicians, and hospital workers in areas of the facility other than the hospital inpatient area.

Both indexes control for regional differences in part-time employment since they are based on the average hourly wage in each urban or rural area. However, because many hospitals have indicated that they had difficulty in determining the wages and salaries and hours worked for the excluded worker categories used to develop the adjusted gross wage index, that index is probably not as accurate as the gross wage index.

The prospective payment system is built upon the concept of averaging. The standardized rates are based on the averages of hospital average inpatient operating costs per discharge in urban and rural areas within the nine census regions and the nation. Similarly, the wage index is constructed using average hospital wages in each urban and rural area compared to a national average wage.

In such a system, the effect of individual differences is mitigated by the inclusion of large numbers of entities. Because the system is comprised of many hospitals and many workers, variations in the practices of individual hospital need not have a pronounced effect on the area average.

In over 90 percent of the urban and rural areas, both the gross and adjusted wage indexes change in the same direction when compared to the BLS index. In effect, using either survey-based wage index would not change the national outcome appreciably, although there would be significant differences in impact between the two indexes in some areas.

Because the precision of the adjusted gross wage index is more problematic, we believe that the gross wage index is the better of the two wage indexes derived from the HCFA wage survey. The gross index we would use is derived from gross hospital salaries and accounts for regional variation in part-time employment and length of work week by using an average hourly wage instead of an average monthly wage, as the basis for measuring local differences in wage levels.

The results of our survey may prove to be unexpected to some. Although the survey-based data, which accounts for geographic differences in the use of part-time workers, was expected to favor rural areas, this did not occur in the aggregate as shown in Appendix A. Nevertheless, it is true that for many rural areas, the survey-based wage index is higher than the current 1981 BLS wage index. In view of these results and since the data series employed in the construction of the survey-based wage index is dissimilar from that used by BLS, we specifically request comments regarding possible alternatives to use of the survey-based gross wage index. In addition to soliciting comments as discussed in section I.B. of the preamble, we would appreciate receiving suggestions on how we should update the HCFA survey-based wage index if that is the index we decide to use. For example, we could do a new survey every two or three years, or we could request that hospitals submit additional data with their cost reports or as a part of some other reporting vehicle.

The method used to compute the proposed wage index (Tables 4a and 4b of the addendum) is as follows:

Step 1—Each of the 5,595 non-Federal acute care hospitals subject to the prospective payment system, for which a properly completed survey form has been received, is classified into its appropriate urban or rural area based on the Executive Office of Management and Budget's (EOMB's) metropolitan statistical area (MSA) definitions that were affective June 30, 1984, with the addition of a change in the St. Louis MSA that became effective after October 1, 1984, and which would be recognized prospective payment purposes beginning October 1, 1985.

Step 2—For each hospital, the total gross hospital salaries (item 4 on the survey report) are inflated from the end of the hospital's cost reporting year through the end of calendar year 1982 using the annual 1982 rate of increase in the wages and salaries portion of the hospital market basket. The annual rate was 11.0 percent. This is done to eliminate any distortion in the data caused by differing hospital cost reporting years.

Step 3—For each hospital, the inflated gross hospital salaries computed in step 2 are divided by the reported number of total paid hours worked (item 12 on the survey report) to yield an average hourly wage.

Step 4—Hospitals with an aberrant average hourly wage, which is defined as an average hourly wage either less than $3.35 (the minimum wage in 1982) or greater than $19.58 (2.5 times the 1982 national average hourly hospital wage as reported in BLS' *Employment and Earnings Bulletin* as of February 1984), are excluded. This results in the elimination of records from 73 hospitals.

Step 5—Within each urban or rural area, the result computed in step 2 is summed for all remaining hospitals to yield the total gross hospital salaries in each area.

Step 6—The total gross hospital salary result computed in step 5 is divided by the corresponding total number of paid hours worked to yield an average hourly wage for each urban or rural area.

Step 7—The arithmetic mean of the result in step 6 is computed across all urban and rural areas to obtain the national average hourly hospital wage based on gross salaries. The national average is $8.03.

Step 8—For each urban or rural area, the hospital wage index is calculated by dividing the average hourly wage computed in step 6 by $8.03, the national average.

The wage index values listed in the addendum may differ slightly from those included in our March 29, 1985 report to Congress on the HCFA wage index. These differences result from a statutory change in the St. Louis MSA definition as well as revised audit adjustments that were made subsequent to the issuance of the report.

C. Retroactive Application of Proposed Wage Index

On July 18, 1984, while we were conducting our survey, Congress enacted section 2316 of Pub. L. 98–369, which requires the Secretary to conduct a study to develop an appropriate wage index that specifically addresses the part-time employment problem. As mentioned above, this study was presented to Congress on March 29, 1985. We are continuing to examine the limitations and advantages of the survey-based and the BLS wage indexes. In addition, section 2316(b) specifies that any changes made in the wage index under that provision of the law are to be retroactive to cost reporting periods beginning on or after October 1, 1983. We specifically request comments on this issue of retroactivity.

We believe that applying the survey-based wage index retroactively would be inconsistent with a major premise of the prospective payment system, which is that hospitals know in advance of each discharge the amount they can expect to be paid by Medicare. We maintain that, under this system, retroactive adjustments would erode the prospective nature of the system.

Despite our concerns about the retroactive application of a new wage index, we must comply with the requirements of section 2316(b) if the survey-based wage index were adopted. Therefore, in such a case, we would make the appropriate payment adjustments to overpaid and underpaid hospitals throughout FY 1986. The survey-based wage index used to determine the amount of a hospital's underpayment or overpayment would be based on the recognized MSA definition in effect for the entire cost reporting period for which the payment adjustment determination is being made.

We believe that spreading the payment adjustments over the course of one year, rather than requiring lump-sum payments, would minimize the negative impact on overpaid hospitals. Therefore, to accomplish these adjustments, we would require that overpaid hospitals make 26 equal payments to us throughout FY 1986. Conversely, we would make 26 equal payments to underpaid hospitals over the same period of time.

IV. Other Proposed Regulations Changes and Current Provisions

A. Rate of Increase Limits (§ 405.463)

Section 101 of the Tax Equity and Fiscal Responsibility Act of 1982 (Pub. L. 97–248) added section 1886 to the Act in an attempt to restrain growth of hospital costs. Specifically, as originally enacted, section 1886(b) of the Act set forth a program of control on hospital cost increases. This provision required that we establish a ceiling target level for the allowable rate of increase of hospitals' inpatient operating costs per case. In addition, the statute provided for incentive payments for hospitals that keep their costs below the target, and penalties for hospitals that incur costs greater than the target.

This target rate system was expected to apply only to hospital cost reporting periods beginning before October 1, 1985 (section 1886(b)(2) of the Act). However, Pub. L. 98–21, which established the prospective payment system, also extended the target rate system indefinitely for all hospitals excluded from the prospective payment system by repealing section 1886(b)(2) of the Act.

1. *Target Rate Percentage.* Each hospital's target amount is increased annually, before the beginning of its cost reporting period, by an applicable target rate percentage for the 12-month period, prorated based on calendar year target rate percentages. As set forth in section 1886(b)(3)(B) of the Act as amended by 601(b) of Pub. L. 98–21, the target rate percentage was the estimated hospital

market basket increase factor plus one percentage point.

Section 2310 of Pub. L. 98-369 revised section 1886(b)(3)(B) of the Act to provide that, for cost reporting periods beginning in FY 1985, the annual inflation rate to be applied for updating the target rate is equal to the estimated hospital market basket increase factor plus one-quarter of one percentage point. Beginning in FY 1986 (cost reporting periods beginning on or after October 1, 1985), the target rate percentage will be adjusted by an update factor determined by the Secretary under section 1886(e)(4) of the Act, considering the recommendations of ProPAC under section 1886(e)(2) of the Act.

Currently, § 405.463(c)(3)(i) states that the target rate percentage is equal to the estimated increase in the market basket index plus one percentage point. We are proposing to revise § 405.463(c)(3)(i) to reflect the changes made by Pub. L. 98-369.

2. *Exemption for New Hospitals.* When we published the regulations implementing section 101 of Pub. L. 97-248 on September 30, 1982 (47 FR 43282), we included a provision that exempted new hospitals from the target rate system (§ 405.463(f)(1)). A new hospital is a provider of inpatient hospital services that has operated as the type of provider for which it is certified for Medicare participation under present and previous ownership, for less than three full years. We exempted new hospitals from the rate of increase limits to prevent the distortion inherent in a new hospital's operating cost per case from adversely affecting its target rate reimbursement. This exemption expired at the end of the earliest of—

- The first cost reporting period beginning at least two years after the hospital accepts its first patient; or
- The first cost reporting period beginning on or after October 1, 1985 (that is, the statutory expiration date for the rate of increase limits).

However, when we revised the regulations at § 405.463 in the September 1, 1983 interim final rule with comment period, we inadvertently did not delete the October 1, 1985 date from § 405.463(f)(1). Therefore, under the current regulations, for cost reporting periods beginning on or after October 1, 1985, new hospitals that are excluded from the prospective payment system will be subject to the rate of increase limit.

Since the reasons for providing a new hospital exemption remain as valid today as when the target rate system was first established, and since the statutory termination date of October 1, 1985 has been repealed, we are proposing to revise § 405.463(f)(1) by deleting the October 1, 1985 expiration date for the exemption.

B. Exclusion of Alcohol/Drug Hospitals and Units (§§ 412.23 and 412.32)

In the January 3, 1984 final rule, we developed a set of criteria for the exclusion of hospitals and distinct part units that specialize in alcohol/drug dependency treatment. As provided in §§ 412.23(c) and 412.32, this exclusion terminates on October 1, 1985. However, if the exclusion expires on that date, all excluded alcohol/drug hospitals and units, regardless of their actual cost reporting period, would have to close their books and file cost reports as of September 30, 1985.

Since we originally intended these hospitals and units to be excluded for a full two years from the prospective payment system and because we believe it would be inappropriate to force excluded entities to close their cost reporting periods on September 30, 1985, we are proposing to revise §§ 412.23(c) and 412.32. As revised, the exclusion would expire at the end of the hospital's cost reporting period that began before October 1, 1985. Formerly excluded alcohol/drug hospitals and units would no longer maintain any separately recognized program (for example, a subprovider number or separate cost accounting). These entities would become indistinguishable from other prospective payment hospitals.

C. Review Activities

1. *Responsibility for Medical Review (Subparts C and F of Part 412).* In the January 3, 1984 final rule, we used the term "medical review entity" to describe the various organizations that would be performing inpatient hospital medical review (49 FR 282). We used this term because, at that time, we had not implemented the Utilization and Quality Control Peer Review Organizations (PRO) program. Until the PROs were in place, PSROs and fiscal intermediaries were responsible for determining the medical necessity, appropriateness, and quality of care as well as performing DRG validation. In addition, they were responsible for providing appropriate medical determinations in connection with coverage rules. To avoid confusion, we used the term medical review entity to refer to any of these organizations (that is, PSRO, PRO, or intermediary).

Now that the PROs are fully functioning, they have the responsibility for the medical review of hospital claims. Therefore, in Subparts C and F of Part 412, we are proposing to replace all references to medical review entities, PSROs, and to fiscal intermediaries, as appropriate, with a reference only to PROs.

2. *Limitations on charges to beneficiaries (§ 412.42).* In the January 3, 1984 final rule, we added § 405.472(b)(1)(iii) (since redesignated at § 412.42(c)) to allow hospitals to charge beneficiaries for items and services excluded from coverage on the basis of § 405.310(g) (custodial care) or § 405.310(k) (medically unnecessary services) if certain conditions are met and the services are furnished by the hospital. The conditions are the following:

- The hospital determines, with the concurrence of either the beneficiary's attending physician or the PRO, that the beneficiary no longer requires inpatient hospital care.
- The hospital notifies the beneficiary in writing of that determination.

We provided this mechanism because the prospective payment system did not change Medicare's coverage rules and was not intended to prevent a hospital from charging a beneficiary for a noncovered service that he or she might choose to receive. In order to ensure that beneficiaries are protected from liability for noncovered services about which they had not been informed, we included § 412.42(c)(3), which requires that the written notice contain specific information.

Since implementation of the PRO program, we have received inquiries from some hospitals and hospital associations, in States which either have a State cost control system approved under section 1886(c) of the Act or participate in a demonstration project authorized under section 402(a) of the Social Security Amendments of 1967 (Pub. L. 90-248) or section 222(a) of the Social Security Amendments of 1972 (Pub. L. 92-603), concerning the hospital's authority to charge beneficiaries for custodial or medically unnecessary care. Before the PRO program, many of these hospitals were delegated the PSRO review function; that is, they could review and deny services by issuing denial letters to beneficiaries. Under the PRO program, however, they no longer are delegated this authority.

Hospitals paid under a State cost control system or demonstration project believe that they are at a disadvantage as opposed to prospective payment hospitals. They argue that they may be faced with situations in which they have to provide medically unnecessary or custodial care and there is no administrative mechansim that enables the hospitals to notify the beneficiary of

noncoverage in a manner that the State will find provides a satisfactory basis for Medicaid payment for an ICF level of care in the hospital. The hospitals can give notices of noncoverage under the waiver of liability regulations (§ 405.332). However, these notices, unlike the notices under the stricter requirements of § 412.42(c) applicable to prospective payment hospitals, can be given without the concurrence of either the attending physician or the PRO. Thus, the States operating under a State cost control system or demonstration project are not prepared to accept these notices as a basis of Medicaid payment to the hospital for an ICF level of care. The hospital must wait for Medicaid payment until the PRO makes a retrospective determination regarding the level of care furnished.

We agree with the hospitals and, therefore, propose to amend the regulations by adding a new § 405.308 to provide that the notice requirements of § 412.42(c) rather than § 405.332 would apply when a hospital receiving payment under a State cost control system or demonstration project gives notices that a beneficiary who has been admitted for covered care no longer requires inpatient hospital services.

We have learned that many prospective payment hospitals have inappropriately implemented the notice process required by § 412.42(c), resulting in a detrimental effect on beneficiaries and inappropriate program payments. Some examples of inappropriate practices have included the following:

- Notices that do not contain all of the required elements.
- Notices that do not make it clear that the *hospital*, with the concurrence of the attending physician or the PRO, has determined that the patient no longer requires hospital care. (The language of some notices has implied, in effect, that Medicare will no longer pay for the hospital stay or that Medicare benefits have been exhausted, or the language fails to fix responsibility for the decision on the hospital).
- Notices that give an incorrect date on which the beneficiary will become responsible for charges and sometimes make the beneficiary responsible retroactively to the date of admission. (In some cases, the notice is given after discharge).
- Some hospitals have not given specific notices but rather have required the beneficiary to sign a blanket statement upon admission accepting responsibility for whatever Medicare may not cover. The hospital then charges the beneficiary later if Medicare finds the stay or any part of the stay noncovered.
- Some hospitals "discharge" a beneficiary from Medicare status and "readmit" him or her on a private pay basis without issuing a proper notice and without the beneficiary leaving the hospital bed. The hospital then charges the beneficiary from the point of "readmission".

These practices create financial burdens on beneficiaries that are often inappropriate and that were unintended when the requirements of § 412.42(c)(3) were written. In addition to causing confusion, fear, and frustration for the beneficiaries, these practices lead to inappropriate payments by beneficiaries and the Medicare program. Some of the care in question may well have been covered and, as such, included in the program's payment to the hospital. In other cases, under Medicare law and regulations, liability for the noncovered care might have been assigned to the hospital.

However, we believe that these difficulties may have been due, in part, to misunderstandings by hospitals as to how the prospective payment system operates, and, therefore, we have issued instructions to the PROs on this subject. The instructions (PRO manual, Interim Manual Instruction, Transmittal No. 85-3) specify that the PROs are responsible for monitoring the notices used by hospitals and provide further guidance on the appropriate content of the notices.

We plan to continue to monitor this situation carefully to ensure that inappropriate notices are no longer being provided. If the situation does not improve, we will consider removing this provision from the regulations to preclude hospitals from charging beneficiaries for items and services excluded from coverage on the basis of custodial care or medically unnecessary services. We would be interested in receiving comments about this problem and possible solutions.

Also, we are proposing to revise § 412.42(c)(3)(iv) to allow the attending physician as well as the hospital or the beneficiary to appeal a PRO's decision on the validity of a hospital's finding that a beneficiary's stay is no longer covered care. This change would conform the regulations to the requirements of § 473.12(a)(1), in the PRO regulations that were published April 17, 1985 in the **Federal Register** (50 FR 15364).

We are proposing to make a technical change in §§ 412.42(d) (3) and (4) to indicate that validation of a hospital's findings regarding coverage are made by the intermediary and the PRO (to the extent that there is a medical component to the decision). Reference to the role of the PRO in this activity was inadvertently omitted from the regulations earlier.

3. *Admission Pattern Monitoring (§ 412.45).* Section 412.45 describes the method we use under the prospective payment system to monitor the pattern of admissions in a hospital by reviewing the hospital's discharge rate. We are proposing to delete this section from the regulations because our operating experience with this type of review has led us to begin developing admission pattern monitoring procedures that are more efficient and that use more current data than the data referred to in §412.45.

We are developing a system under which we would require the PRO to respond to admission pattern reports (which often are nearly nine months old) by explaining the basis for the variation using their review experience. If there is no reason for the variance, we would require that the PRO intensify its review of current cases to eliminate any inappropriate admissions. We believe that it is more appropriate to focus actual review efforts on current rather than past cases so that these efforts are expended to produce behavior changes.

Therefore, we propose to delete the detailed regulatory description of the activity so that our simplified and revised system, once developed and tested, can be implemented immediately. We note that § 412.44(a) contains a requirement for admissions pattern monitoring and our only objective in deleting §412.45 is to eliminate the regulatory requirements that deal with procedures and time frames for conducting this function.

D. Payment for Cost Outliers (§ 412.84)

Under the prospective payment system, an additional payment is made to hospitals for atypical cases known as "outliers." These are cases that have either an extremely long length of stay or extraordinarily high costs when compared to most discharges classified in the same DRG.

A day outlier case is a discharge in which the length of stay exceeds the geometric mean length of stay for discharges in the DRG by the lesser of a fixed number of days or a fixed number of standard deviations. A cost outlier case is a discharge that does not qualify as a day outlier case but in which covered charges adjusted to costs exceed the greater of a fixed dollar amount or a fixed multiple of the Federal prospective payment rate.

Currently, § 412.84 requires that, in the case of a cost outlier, the hospital must request medical review of all services furnished to the beneficiary. This

medical review is performed before the additional amount requested by the hospital can be paid. Of course, if the medical review determines that some of the services are noncovered, the charges for those services will not be considered in determining if the claim meets the cost outlier threshold or the outlier payment amount.

Our experience in this area has demonstrated that the medical review of cost outliers interferes with a hospital's cash flow and the denial rate is relatively low (currently, five percent on a national basis). Therefore, we believe that there is no longer a need to require medical review of these discharges on a prepayment basis. In addition, we believe that it is no longer necessary to review 100 percent of all hospital's cost outlier cases, even after payment is made.

We are proposing to revise § 412.84 to provide that medical review prior to payment of cost outliers would not be required. However, if the PRO finds that a hospital has a pattern of inappropriate billing, the PRO could review all cost outlier cases for these hospitals prior to payment. For cases in which payment is made for a cost outlier prior to medical review, the PRO would review a sample of these cases after payment. (Currently, we require a 50 percent sample on a national basis.) If the PRO determines that any services furnished in these cases are noncovered, the outlier payment for those services would be recovered from the hospital.

In addition to these changes, we would also revise § 412.84 to allow hospitals to request an outlier payment at the time they submit the bill for the discharge. Currently, hospitals cannot make this request until they receive the intermediary's determination of the prospective payment rate for the discharge. We are proposing this change because we believe that it is unfair to require hospitals to wait several weeks to receive cost outlier payments when they are reasonably sure that the claim meets the cost outlier threshold.

E. Referral Centers (§ 412.96)

In the August 31, 1984 final rule, we added an alternative set of criteria to § 412.96 (then § 405.476(g)) that expanded the definition of referral centers to encompass more rural hospitals. We also added a new paragraph to that section that provides for a triennial review of referral centers to determine if they continue to meet the criteria of a referral center. (See 49 FR 34740 for a detailed discussion of these revisions.)

One of the criteria that a hospital must meet is a case-mix index value that demonstrates the comparatively high degree of complexity of cases treated by the hospital. We selected this criterion because we believe that, in the case of rural hospitals, the complexity of cases treated in the facility is one of the principal characteristics that distinguishes between rural referral centers (that is, hospitals that offer a variety of specialized services and are comparable to urban acute care facilities) and typical rural hospitals. In the August 31, 1984 final rule, we set forth in § 412.96(c)(1) four different case-mix index value criteria, one of which a hospital must meet in order to qualify as a referral center for cost reporting periods beginning on or after October 1, 1984. These case-mix criteria are also one of the factors against which a referral center is judged during its triennial review.

We are proposing to update the case-mix index values effective October 1, 1985. These proposed values are updated using the most current data we have available on case-mix. We believe that it is necessary to update the case-mix index values not only to enable new hospitals to qualify as a referral center, but also to provide current criteria against which existing referral centers can be measured to determine if they continue to qualify for special treatment on the basis of their case-mix index.

We believe that the case-mix index criteria should be updated to reflect case-mix index increases that have occurred since the current criteria became effective. In addition, we believe that, rather than entering the actual criteria in regulations text, we should amend the regulations to describe our method for calculating and publishing the criteria. Therefore, we are proposing to revise § 412.96 so that it describes the process we would use to calculate the case-mix indexes and to provide that we will publish the updated case-mix index values in the annual notices of prospective payment rates.

We would determine a national average case-mix index value using claims data from the current fiscal year. Since we would have to calculate this value before the current fiscal year is over in order to include it in the annual proposed and final notices of prospective payment rates, we would be unable to include all the claims data from this year. However, in the proposed notice, we would include at least all data through the midpoint of the current fiscal year (March 31) and we would continue to include new data and make revisions up until publication of the final notice. We would compare the national average case-mix index value to our base year case-mix standard of 1.03. The percentage of change (increase or decrease) would be used to update the 1.03 standard for this year.

We would also update the regional median urban case-mix index values using the same methodology; that is, using the percentage of change to update the 1981 regional standards. The values (both national and regional) would be effective for cost reporting periods beginning on and after the same date the prospective payment rates are effective.

The criteria published for FY 1986 would be used to evaluate hospitals seeking to qualify as referral centers for cost reporting periods beginning during that Federal fiscal year. Thus, if a hospital with a cost reporting period beginning on December 1 and ending November 30 applies for referral center status beginning on December 1, 1985, its case-mix index value for the period December 1, 1984 through November 30, 1985 must meet one of the criteria published effective for October 1, 1985.

In addition, these case-mix criteria would be used during HCFA's triennial review to evaluate hospitals that are currently granted referral center status. As discussed in detail in the August 31, 1984 final rule (49 FR 34746), HCFA will review referral centers every three years to determine if they continue to meet the referral center criteria. A hospital that fails to continue to meet the criteria needed to qualify for referral center status in its first two years of participation will automatically be disqualified after the third year. In other situations, we will evaluate the hospital's performance during the third year in conjunction with experience in the first two years to determine if referral center status should be continued. Therefore, the case-mix index value of a hospital that is a referral center for its cost reporting period beginning in FY 1985 would have to meet the criteria effective on October 1, 1985 during its cost reporting period beginning on or after October 1, 1984 and before October 1, 1985 in order to retain its status. Thus, the case-mix index values and the time periods under review are the same for both hospitals seeking to qualify as referral centers and current referral centers.

Since section 1886(d)(5)(C)(i) of the Act requires that a hospital must submit its request for referral center status during the quarter preceding the start of its cost reporting period, we realize that complete data on a hospital's case-mix index for the current cost reporting period would not be available at the time a determination would be made. However, every effort would be made to include as many claims as possible and

we do not believe the missing data will be significant in most cases. To determine a hospital's case-mix index, we would accept only data maintained by HCFA's central office and, if necessary, data produced by a hospital's fiscal intermediary that is more current than the central office data. However, as noted in the August 31, 1984 final rule (49 FR 39743), we would not accept as a substitute case-mix data produced by the hospital or any outside organization.

We are proposing that to qualify as a referral center for cost reporting periods beginning on or after October 1, 1985, a hospital's case-mix index for its second year under the prospective payment system would have to be at least—

- 1.1172; or
- Equal to the median urban case-mix index values calculated by HCFA for the census region in which the hospital is located as indicated in the table below.

Region	Adjusted median urban case mix
1	1.1443
2	1.1616
3	1.1226
4	1.1345
5	1.0955
6	1.1085
7	1.0542
8	1.1454
9	1.1638

For both the national case mix and median urban values, we multiplied the 1981 standards as published in the August 31, 1984 final rule (49 FR 34741) by 9.6 percent. This figure represents the percentage by which the average case-mix index value has increased from 1981 through April 1985. The resulting figure was divided by 1.0105 to account for the reduction in the DRG relative weights for discharges occurring on or after October 1, 1984. (See the August 31, 1984 final rule (49 FR 34770) for a detailed discussion of this matter.) Thus, the proposed national case-mix criterion is computed as follows:

$$\frac{1.03 \times 1.096}{1.0105} = 1.1172$$

The same method was used to update the 1981 regional median urban case-mix index values.

We are also proposing to revise § 412.96(c)(2) to specify that we would publish the criteria for the number of discharges in each year's annual notice of prospective payment rates. Thus, we would be using the same process for discharges as we would for case mix. However, we are not proposing to update the number of discharges criteria for FY 1986 because current data are not available on total inpatient discharges for individual hospitals. Therefore, the criteria published in the August 31, 1984 final rule (49 FR 34741) would be used for FY 1986.

In addition, we are proposing to revise the title of § 412.96(b) to correct an inadvertent error that occurred when the regulation was recodified in the March 29, 1985 final rule. The current title indicates that the criteria set forth in paragraph (b) apply only for cost reporting periods beginning before October 1, 1984. We never intended that these criteria be limited to a particular time period. Therefore, we would revise the title to indicate that these cirteria apply for cost reporting periods that began on or after October 1, 1983 or in the future. We are also making a technical change to § 412.96(f) to clarify the provisions of that paragraph.

F. Indirect Medical Education (§ 412.118)

Section 1886(d)(5)(B) of the Act provides that hospitals subject to the prospective payment system receive an additional payment for the indirect costs of medical education. The amount of this payment is based on a hospital's ratio of full-time equivalent interns and residents to bed size. The regulations governing this provision are found at § 412.118.

In our August 31, 1984 final rule, we revised § 412.118 (then § 405.477) based on the amendment made to section 1886(d)(5)(B) of the Act by section 2307(b) of Pub. L. 98–369. The amendment requires that, in determining the additional payment amount for indirect medical education, we must count interns and residents on the basis of where they furnish services, regardless of which entity (for example, hospital, university, or medical school) employs them. However, no intern or resident is counted as more than one full-time employee for any cost reporting period. (See the August 31, 1984 final rule for a detailed discussion of this revision (49 FR 34747).)

We are proposing to revise § 412.118 to change the way interns and residents are counted for purposes of making payment for indirect medical education costs effective with cost reporting periods beginning on or after October 1, 1984. Currently, § 412.118(e) provides that interns and residents must work 35 hours or more per week to be counted as one full-time employee. All interns and residents who do not meet this criterion are counted as one-half of a full-time employee. At present, we determine the additional payment amount based on the number of interns and residents employed during the last week of a hospital's cost reporting period. Therefore, if an intern or resident works for a hospital at least 35 hours per week for only a few weeks at the end of its cost reporting period, that individual is counted as a full-time employee.

Section 412.118(d)(2) currently requires that hospitals must submit a quarterly report to their fiscal intermediaries that includes, among other information, the actual hours worked by each intern and resident during each month. Since we published these criteria in the August 31, 1984 final rule, we have received numerous comments from hospitals that indicate that their recordkeeping capability does not allow them to determine the "acutal hours" worked by interns and residents at their facilities.

We believe that the 35-hour threshold is not reflective of the normal work week of interns and residents. Furthermore, the use of hours as a measure of intern or resident time requires substantial recordkeeping, and, if interns and residents rotate among several hospitals, a method of apportionment that is not necessarily consistent with reporting and counting for an institution's or program's scheduling purposes.

It is our understanding that nearly all intern and resident programs schedule an intern or resident at one hospital for a period of time, usually whole months, rather than splitting an individual intern's or resident's day or week among several hospitals. Moreover, it appears that most hospitals attempt to maintain fairly even staffing levels of interns and residents over the course of the graduate medical academic year.

Based on the assumption that intern and resident levels are basically constant over the July through June graduate medical education year, we propose that interns and residents be counted on a single day. This method should avoid the potential for overcounting since, except in rare instances, on any given day an intern or resident is not assigned to more than one hospital.

We are proposing that the additional payment for indirect medical education costs for a hospital cost reporting period would be based on the number of interns and residents assigned to the hospital on September 1 during the hospital's cost reporting period. Thus, we would be replacing our current requirement for quarterly reports with

one for an annual report covering only one day of the year.

We are proposing that this method of counting interns and residents on September 1 each year be retroactively applied to all hospital cost reporting periods beginning on or after October 1, 1984. That is the date on which we implemented the system of reporting quarterly on intern and resident time. We believe that our proposed method is far superior to the current method, and because it is far less cumbersome for both hospitals and the intermediaries, we believe that it should replace the current system entirely.

We believe that a count on September 1 would be reflective of intern and resident assignments throughout an academic year (generally July 1 through June 30) and would be the basis for the indirect medical education additional payment for the academic year beginning the previous July. We are not aware of any intern and resident programs that do not conform to this timeframe. However, we are specifically soliciting comments from representatives of any medical education programs with academic years other than July 1 to June 30 as to what impact the September 1 date would have upon their hospitals.

For hospitals with cost reporting periods beginning on July 1, the same date that their graduate medical education programs begin, there would be a relatively stable number of interns and residents throughout the cost reporting period. However, in any other hospital, the cost reporting period would span more than one academic year. Thus, there could be significant fluctuation between the two years in the number of interns and residents to be counted. This fluctuation could result from the addition or deletion of programs or an unusually high or low number or resignations from programs during a particular academic year. In these cases, we would apportion the intern and resident count between the two periods based on counts of two consecutive September 1 dates to minimize the possibility of incorrect levels of payment.

For example, a teaching hospital has a cost reporting period from January 1 through December 31, 1986. For purposes of counting interns and residents, the assigned count on September 1, 1985 would apply to half the cost reporting period (discharges occurring from January 1 through June 30, 1986), since it falls within that academic year. The count taken on September 1, 1986 would apply to discharges occurring from July 1 through December 31, 1986 (the remaining half of the cost reporting period), since it falls within the subsequent academic year. Accordingly, in determining the intern and resident count that would be used in determining the additional payment for indirect medical education for the cost reporting period January 1 through December 31, 1986, we would use a weighted average. If there are 10 interns and residents assigned on September 1, 1985 and 12 on September 1, 1986, the count that would be used for the entire cost reporting period would be 11 as calculated below:

$$\left(\frac{6}{12}\times 10\right)+\left(\frac{6}{12}\times 12\right)=11$$

Another example is a hospital with a cost reporting period from August 1, 1985 through July 31, 1986. If the intern and resident count on September 1, 1985 is 240 and on Sepetember 1, 1986 is 180, then its count would be calculated as follows:

$$\left(\frac{11}{12}\times 240\right)+\left(\frac{1}{12}\times 180\right)=235$$ interns and residents for the cost reporting period.

Prior to October 1, 1984, hospitals were not required to keep schedules of assigned time or logs of actual time on which to base the intern and resident count. While we believe that most teaching hospitals do have these records, there may be some that do not. Therefore, for cost reporting periods beginning on or after October 1, 1984 and before July 1, 1985, we propose to use April 15, 1985 instead of September 1, 1984 as the uniform reporting date. Since we issued the August 31, 1984 final rule to include this count effective for cost reporting periods on or after October 1, 1984, we believe that these hospitals woud have been keeping the necessary records by April 15, 1985. In subsequent years, all hospitals would use the September 1 date. An example of such a hospital follows: Hospital B has a cost reporting period from January 1 through December 31, 1985. Hospital B has a count of 20 interns and residents on April 15, 1985 and 24 on September 1, 1985. The Count for the cost reporting period is calculated as follows:

$$\left(\frac{6}{12}\times 20\right)+\left(\frac{6}{12}\times 24\right)=22$$

We believe that this proposed policy would result in levels of payment at final settlement that are reflective of the actual intensity of teaching activity during the portion of the cost reporting period that falls within a particular academic year.

Before selecting this method for reporting the intern and resident count, we considered various alternatives. Other considered methods involved counting actual hours worked, scheduled hours worked, person-months, person-weeks, or some other assigned-time basis. These alternative measures all required sophisticated recordkeeping and, in some instances, substantial programming and administrative costs. We believe that the results of these intensive measurements may not be substantially more precise than the single-day concept. Furthermore, we understand that the American Medical Association and the Association of American Medical Colleges use the September 1 date for their data collection purposes. Therefore, we would not be requiring any new data collection by teaching hospitals.

Many interns and residents are assigned to freestanding family practice centers, hospital outpatient departments, and excluded units, such as psychiatric units. Currently, time spent in freestanding family practice centers and excluded units is not counted for purposes of the indirect medical education payment since these settings are not subject to the prospective payment system. Although we are currently counting time spent in outpatient departments, we are proposing that time spent in these departments would not be counted for purposes of the indirect medical education payment because outpatient departments also are not subject to the prospective payment system.

Interns and residents assigned to excluded areas of the hospital would be counted based on where they are assigned on September 1. Thus, an intern or resident who is assigned to an excluded area on September 1 would not be counted for the indirect medical education payment. However, if an intern or resident is dividing his or her time between these areas and the areas or units of a hospital subject to the prospective payment system, the hospital would have to report to its intermediary the proportion of time spent in or assigned to both the included and excluded areas. Interns and residents in these cases are the only individuals that would be counted as other than one full-time employee and the indirect medical education payment would be computed based on the proportion of time assigned to the areas

of the hospital subject to the prospective payment system.

Instead of requiring hospitals to keep records on number of hours worked, we would instead require them to keep records on assignment of interns and residents by specialty. To the extent that hospitals operate intern and resident programs in certain specialties, we would want to be able to verify that the assignment of interns and residents on September 1 (and during the rest of the year) reflects the hospital's actual circumstances. For example, we would consider it unusual for a hospital to operate a psychiatry residency program and not have any interns or residents assigned to the excluded psychiatric unit.

The additional payment for the indirect medical education costs is computed on the basis of the ratio of interns and residents to hospital bed size. Currently, for determining the intern and resident to bed ratio, as well as for classification purposes, a hospital's bed size has been determined based upon the total number of beds available on the first day of the pertinent cost reporting period. Since a hospital's bed size may increase or decrease, sometimes substantially, over the course of a cost reporting period, we are proposing to base the number of beds on the number of available bed days (excluding beds assigned to newborns and excluded units) during the current cost reporting period divided by the number of days in the cost reporting period. This change would also be effective with cost reporting periods beginning on or after October 1, 1984.

We believe that a hospital's assignment of interns and residents on one day (September 1) would generally be representative of the academic year as a whole. However, it may be necessary at settlement for intermediaries to audit hospital records to verify the documentation of the September 1 assignments as reported to us and to verify that the September 1 count is representative of the count over the entire cost reporting period. This documentation may include residency program assignment schedules, intern and resident contracts, and payroll records. The hospital could submit more comprehensive data, but, as in all other cases, it must furnish verfiable documentation in support of its claim for payment. The intermediaries would match the data to ascertain that no intern or resident is counted more than once. Based on its review of the hospital's documentation, the intermediary may adjust the intern and resident to bed ratio for purposes of the final indirect medical education payment.

G. Transfer Policy (§ 412.4)

Our current policy concerning transfers between prospective payment hospitals provides for transfering hospitals to receive payment on a per diem basis. The discharging hospital receives the full DRG payment. Transferring hospitals may also receive an additional payment for extraordinarily high-cost cases that meet the cost outlier criteria in §§ 412.80 and 412.84; they are not eligible for day outlier payments.

As we have stated in previous prospective payment documents (most recently in the August 31, 1984 final rule (49 FR 34730)), our ultimate goal is to make one payment for the entire course of treatment. Because of the complexities of this issue, we are not proposing any changes in the regulations that would implement a new transfer policy at this time. However, we want to note that we are continuing to study this problem and to collect relevant data so that we can implement a single payment for transfers in the future.

V. Other ProPAC Recommendations

As required by law, we have reviewed the April 1, 1985 report submitted by ProPAC and have given its recommendations careful consideration in conjunction with the formulation of the proposals set forth in this document. The recommendations are discussed throughout this preamble and in the addendum to this proposed rule along with our proposals concerning the same issues. The remainder of the recommendations are discussed below.

A. Hospital Market Basket (Recommendations 2, 4 through 6, and 9)

The hospital market basket represents the most significant component in the update factor used to determine the prospective payment rates. ProPAC devoted considerable attention to this area and made eight specific recommendations. Recommendation 3 concerning the market basket for excluded hospitals is discussed in section III. of the addendum. Recommendations 7 and 8 concerning forecast errors are discussed in section II.A.3 of the addendum to this document.

1. *The Number of Market Baskets (Recommendation 2).* For FY 1986, ProPAC recommends using a single market basket for prospective payment system hospitals. However, it plans to study the appropriateness of developing multiple market baskets by region and class of hospital.

We believe that this is an area that warrants further study and we support ProPAC's research. In the past, we have studied variations in regional market baskets and we plan to continue our research concerning multiple market baskets by region and class of hospital.

2. *Market Basket Wage Component—Occupational Groups (Recommendation 4).* Wages are the largest single component of the hospital market basket, accounting for nearly 60 percent of hospital expenses. Currently, we measure changes in all hospital wages by the Average Hourly Earnings (AHE) in the hospital industry, a data series collected by the BLS. This series does not separate changes in inflation from changes in the skill mix of workers in the hospital industry. As a result, ProPAC suggests that some portion of the growth in the series over time has probably been due to shifts in the type and use of hospital employees (for example, substitution of registered nurses for licensed practical nurses).

ProPAC recommends that separate wage categories by occupational groups should be created to take into account the broad changes in skill mix among managers, professionals, and other hospital workers. ProPAC suggests that changes in wages for these categories should be measured using a combination of internal and external proxy measures as follows:

- Managers and Administrators: The Employment Cost Index (ECI) for Managers and Administrators.
- Professionals and Technicians: A 50–50 blend of the AHE for the hospital industry and the ECI for Professional and Technicians.
- Other Hospital Workers: A 50–50 blend of the AHE for the hospital industry and the ECI for all private industry.

The issue of whether to use only internal proxies as we do in formulating the current single wage component or a combination of internal and external (that is, hospital and nonhospital) proxy measures as ProPAC recommends has been debated for some time. We have opted to use internal proxies, since that position is consistent with our treatment of the wage index, which is also based on internal wage measures. Moreover, as ProPAC notes, the various external measures that might be used (including the ECI) also have certain drawbacks that we believe warrant further examination. We are studying this issue further and plan to develop various market basket models using internal and external proxies, as well as weighted occupational categories, for further consideration.

3. *Employment Cost Index Feasibility Study (Recommendation 5).* ProPAC recommended that the Secretary should work with BLS to study the advantages and feasibility of developing an ECI for the hospital industry that includes both public and private hospitals and covers increases in both wages and fringe benefits.

The basic difference between an ECI and the AHE we currently use to measure increases in hospital workers' salaries is that the ECI controls for occupational mix. Therefore, the ECI would maintain the relative hospital worker skill mix constant over time and would preclude skill mix from affecting the amount of the increase in the hospital wage measure. We agree that this is an area that warrants further study and we plan to examine the merits of establishing an ECI for hospital workers as part of our ongoing analysis of the market basket.

4. *Study Effects of Changes in the Minimum Wage Law on Hospital Workers (Recommendation 6).* ProPAC plans to study the extent to which hospital workers would be affected by changes in the Federal minimum wage law. The intent of the study is to detect whether, under the prospective payment system, workers who earn more than the minimum wages are differently affected by statutory increases in the minimum wage compared with workers in other industries.

Since it is our desire that the prospective payment system be equitable, we would certainly want to know about any dimension of the system that is found to be unfair. The ProPAC's study results indicate that under this system hospital workers are, in fact, differently affected by changes in the minimum wage laws, we would certainly be interested in any recommendations ProPAC can make concerning corrective action.

5. *Rebasing of Market Basket Weights (Recommendation 9).* ProPAC suggests that the market basket weights should be rebased at least every five years or more frequently if significant changes in the weights occur. We agree that it is appropriate to periodically rebase the market basket weights in order to reflect more current data, especially if significant changes in the mix of inputs used by hospitals occur. We are currently in the process of developing rebased market basket weights. We also recognize that the market basket weights may require further revision to account for payment changes that might occur if additional costs, such as capital-related costs, are included in the prospective payment system.

B. Hospital Labor Market Areas—Area Wage Index: Improvement of Labor Market Area Definitions (Recommendation 13)

The current area wage index used to adjust payments for interarea wage differences does not distinguish separate labor markets within MSAs. ProPAC has recommended that the prospective payment rates be adjusted to take into account variations in wages paid within a metropolitan area and in different rural locations within a State. ProPAC notes that several studies have shown that there is substantial variation in the wages paid in the inner city as compared with suburban areas (that is, "core" areas and "ring" areas) within the same MSA and that similar concern has been expressed regarding rural areas within a State. ProPAC observes that some have contended that hospitals in the inner city often must pay premium wages to attract skilled employees and that higher skill levels may be needed in these hospitals to support greater levels of teaching activity. However, it also notes that it has been suggested that inefficiency may also contribute to the higher wage levels in inner city hospitals.

ProPAC recommends that these differences in hospital labor markets be reflected in the application of the area wage index used to adjust the prospective payment rates for actual variation in area wage levels. While ProPAC recommends that labor market area definitions be improved to better reflect hospital labor market areas, the report does not discuss how specific alternatives to the current MSA/non-MSA definitions might be established.

We have previously acknowledged in various **Federal Register** documents that the current MSA/non-MSA definitions may not adequately recognize widely varying hospital labor market conditions, especially among counties classified as rural. We have been looking into possible alternative classification systems that would better define hospital labor markets. The core-ring concept for splitting MSAs that is addressed in ProPAC's recommendation is one alternative that we have previously considered (see the January 3, 1984 final rule (49 FR 254)). In addition, we are studying other classification systems such as the Department of Commerce's Bureau of Economic Analysis economic areas that are defined based on area ties to economic centers.

However, we believe that extensive research and study will be required before alternative labor market definitions are adopted. As with any classification system in which boundaries must be established, it is impossible to designate boundaries that will be completely satisfactory to all concerned. Therefore, we must be certain that any new classification system is based on objective criteria that will provide more equitable labor market area definitions than the current MSA/non-MSA classifications.

C. Hospitals Serving Disproportionate Shares of Low Income or Medicare Patients (Recommendations 14 and 15)

ProPAC recommends that an adjustment be established for FY 1986 rates for hospitals that serve a disproportionate share of low income or Medicare patients or both and that a definition of these hospitals be established based on a broader concept of low income than simply percentage of Medicaid patients.

As required by section 2315(h) of Pub. L. 98-369, we have been working on the development of the definition. However, our research efforts have been hampered by the lack of data of sufficient quality to permit us to develop a definition with any degrees of confidence.

The source of data used to identify hospitals Medicare costs is the Medicare cost report, which is completed annually by each hospital participating in the Medicare program. The Medicare cost report does not, however, include any information on the income distribution of the hospital's patient population. There is space on the cost report for Medicaid utilization and cost information that would permit computation of the hospital's share of Medicaid discharges, a measure which might be used as a proxy for the percentage of discharges attributable to low income patients. Unfortunately, Medicaid information is frequently missing from the cost reports since it has no bearing on Medicare payments. Moreover, because the Medicare program is prohibited from paying for bad debts other than those specifically attributable to our beneficiaries, data on the hospital's overall bad debt picture is not available as an alternative proxy for low income. (Bad debt would itself be a highly questionable measure since it may reflect idiosyncratic hospital charging and collection procedures as well as patient inability to pay. Moreover, it would not be specifically linked to patient income.)

In light of these deficiencies, we have had to turn to other sources of data. The only national source of data on hospital-specific Medicaid and Medicare utilization available to us at this time is

a survey of 5,323 hospitals conducted by the Department's Office of Civil Rights (OCR). However, because the survey was limited to a two-week period during January 1981, was not designed for payment purposes, and was incomplete for many hospitals, its results may not be a satisfactory basis for determining Medicaid utilization for purposes of a disproportionate share analysis. Several hospitals known to treat large numbers of Medicaid patients failed to be identified as such or reported no Medicaid admissions. Other hospitals, known to furnish extensive charity care, appeared to have average or below-average Medicaid and Medicare utilization.

These aberrations cast doubt not only on the reliability of the OCR data but also on the validity of Medicaid utilization as a proxy for low income. It should be noted that state-by-state variation in Medicaid eligibility, as well as amount, duration and scope of benefits, means that an adjustment based on percent of Medicaid patients may simply reward hospitals in those States that have more generous Medicaid programs, hence, higher shares of Medicaid recipients.

We have also reviewed studies from the American Hospital Association (AHA), the District of Columbia (D.C.) Hospital Association, and the Congressional Budget Office. The AHA used data from approximately 2,500 hospitals because many of its own hospitals do not report charity or bad debt information on the AHA survey form. Therefore, this data base is incomplete. In addition, we have not been able to replicate the study because, for reasons of confidentiality, the AHA does not routinely provide the data to outside organizations or to the Federal government.

The D.C. Hospital Association study used data from only 260 hospitals in five metropolitan areas. We believe that such a limited study is inappropriate as the basis for establishing policy on a national basis. In addition, because the data used for average Medicare allowable cost per case, for the percentage of Medicare or Medicaid patients, and for hospital bed size was not available to us, we could not make a reasonable comparison of the D.C. Hospital Association and our data. There were also a number of technical differences between the statistical measures used in the Association's study and our research that precluded direct comparison of the findings.

Currently, we are reviewing a Senate Finance Committee staff proposal to use Medicare patient origin data and census data on the aged with incomes below the poverty level to assess the impact of low-income Medicare patients on hospital costs. We have found preliminary evidence that the percent of Medicaid admissions relates positively to Medicare costs per Medicare case. The "percent of Medicaid admissions" variable, however, comes from the Office of Civil Rights survey discussed above. Although we are concerned that Medicaid population may not be a reliable proxy for low-income, we also are investigating alternative sources of a "percent Medicaid" measure that will be more reliable than the OCR data previously referenced.

In addition, we are attempting to obtain AHA survey data on hospital revenues by sources of funds, bad debts, and charitable care allowances. These data should be more current and might furnish a more direct measure of a hospital's share of low income patients, thus avoiding the inadequacies of the current proxy measures. Once we obtain accurate data, we will be able to turn our attention to analyzing if, in fact, hospitals serving a significantly disproportionate number of low income or Part A Medicare patients experience higher Medicare costs per case due to the provision of care to these patients or if these additional costs are accounted for by severity, inefficiency, or other factors. We will then determine if these costs are already appropriately recognized in the prospective payment system or if additional payment adjustments should be made.

VI. Summary of Proposed Changes to Regulations

For the convenience of the reader, we are summarizing the changes we are proposing to the regulations. The reader is referred to the detailed discussions above for an explanation of the rationale for these changes.

A. Rate of Increase Limits

We are proposing to revise § 405.463 to—

- Provide that the applicable target rate percentage would be the prospectively determined percentage, published by HCFA, based on the estimated market basket index for the calendar year adjusted by other factors as determined by the Secretary; and
- Delete the October 1, 1985 expiration date for the exemption from the rate of increase limit that is available to new hospitals.

B. Changes in the DRG Classification System

We would add a new § 412.10 that describes the procedures we would use to revise the DRG classification system both at the time of the annual prospective payment rate update notice and during the Federal fiscal year.

C. Exclusion of Alcohol/Drug Hospitals and Units

In §§ 412.23(c) and 412.32, we are proposing to change the expiration date of the exclusion for alcohol/drug hospitals and units from October 1, 1985 to the end of the hospital's cost reporting period beginning before October 1, 1985.

D. Review Activities

We are proposing to make changes in Subparts C and F of Part 412 to replace all references to PSROs and medical review entities with references to PROs since the PROs are now fully operational. In addition, we would delete § 412.45, which describes how we monitor discharge rates under the prospective payment system.

E. Charges to Beneficiaries

We are proposing to add a new §405.308 that would allow hospitals excluded from the prospective payment system because of their participation in a State cost control system or demonstration project to charge beneficiaries for custodial or medically unnecessary care after issuing the proper notices that are currently required in § 412.24(c) for prospective payment hospitals.

F. Payment for Cost Outliers

We are proposing to revise § 412.84 to delete the requirement that all cost outlier cases must be reviewed by the PRO before payment. However, these cases could be subject to prepayment review if the hospital demonstrates a pattern of inappropriate billing. The PRO would also review a sample of the claims that were not reviewed prior to payment. If, as a result of its postpayment review, the PRO determines that any services were noncovered, the outlier payment would be recovered from the hospital. We would also revise § 412.84 to allow hospitals to request cost outlier payment at the time they submit bills for payment, rather than waiting until after the intermediary has notified them of its determination on payment for the discharge.

G. Referral Centers

We would revise § 412.96 as follows:

- The title of paragraph (b) would be changed to indicate that this paragraph is effective for cost reporting periods beginning on or after October 1, 1983.

• Paragraphs (c)(1) and (c)(2) would be revised to provide that the criteria related to case-mix index and discharges for referral centers would be published in the proposed and final annual prospective payment rate notices.

• We would add a new paragraph to describe the method we would use to calculate updated case-mix indexes each year.

H. Indirect Medical Education

We are proposing to revise § 412.118 effective for cost reporting periods beginning on or after October 1, 1984 as follows:

• Change the method used to determine the number of beds in a hospital for purposes of counting interns and residents.

• Delete the requirement of a quarterly report from hospitals on numbers of interns and residents and replace it with an annual report that counts by specialty the number of interns and residents on September 1 (with an additional count on April 15, 1985 for hospitals with cost reporting periods beginning on or after October 1, 1984 and before July 1, 1985).

• Delete the requirement of counting hours of interns and residents to determine full-time equivalents. Instead, all interns and residents assigned to the hospital on September 1 (or April 15, 1985, if applicable) would be counted as full-time except for those individuals splitting their time among one or more areas excluded from the prospective payment system.

• Provide for intermediary review of hospital documentation to verify the hospital's intern and resident to bed ratio.

VII. Other Required Information

A. Responses to Public Comments

Because of the large number of pieces of correspondence we normally receive on proposed regulations, we cannot acknowledge or respond to them individually. However, in developing the final rule, we will consider all comments that are received by the end of the comment period and will respond to them in the preamble to that rule.

B. Paperwork Reduction Act

Section 412.118 contains an information collection requirement that is subject to review by the Executive Office of Management and Budget (EOMB) under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501–3511). We have submitted a copy of these requirements to EOMB for its review.

In the January 3, 1984 issue of the **Federal Register** (49 FR 312), we indicated that we intended to seek EOMB approval of the information collection requirements in § 405.471(c)(4)(ii) and (c)(4)(iii)(C) (incorrectly designated as § 405.471(c)(3)(ii) and (c)(3)(iii)(C) and since recodified at §§ 412.27 and 412.29(c), respectively). The information collection requirements in § 412.27 are approved by EOMB under control number 0938–0328. Section 412.29(c) does not contain information collection requirements. Consequently, EOMB approval is not required for this section.

List of Subjects

42 CFR Part 405

Administrative practice and procedure, Health facilities, Health maintenance organizations (HMO), Health professions, Kidney diseases, Laboratories, Medicare, Reporting and recordkeeping requirements, Rural areas, X-rays.

42 CFR Part 412

Cancer hospitals, Christian Science Sanatoria, Discharges and transfers, Inpatient hospital services, Medicare, Outlier cases, Prospective payment, Referral centers, Renal transplantation centers, Sole community hospitals.

C. Impact Analyses

Appendix A, which is printed immediately following the addendum to this proposed rule, sets forth our analyses of the projected impact and effect on small businesses of the proposals that are set forth in this document.

42 CFR Chapter IV, Subchapter B would be amended as set forth below:

CHAPTER IV—HEALTH CARE FINANCING ADMINISTRATION, DEPARTMENT OF HEALTH AND HUMAN SERVICES SUBCHAPTER B—MEDICARE PROGRAMS

I. Part 405 is amended as follows:

PART 405—FEDERAL HEALTH INSURANCE FOR THE AGED AND DISABLED

A. Subpart C is amended as follows:

Subpart C—Exclusions, Recovery of Overpayment, Liability of a Certifying Officer and Suspension of Payment

1. The authority citation for Subpart C continues to read as follows:

Authority: Secs. 1102, 1154(a)(2)(B), 1815, 1833, 1842, 1862, 1866, 1870, 1871, and 1879, Social Security Act (42 U.S.C. 1302, 1302c-3(a)(2)(B), 1395g, 1395l, 1395u, 1395y, 1395cc, 1395gg, 1395hh, 1395pp), and 31 U.S.C. 3711.

2. The table of contents of Subpart C is amended by adding the title of a new § 405.308 to read as follows:

Subpart C—Exclusions, Recovery of Overpayment, Liability of a Certifying Officer and Suspension of Payment

* * * * *

Sec.
405.308 Limitations on charges to beneficiaries.

* * * * *

3. A new § 405.308 is added to read as follows:

§ 405.308 Limitation on charges to beneficiaries.

(a) *Prospective payment hospitals.* A hospital receiving payment under the prospective payment system for a covered hospital stay may charge a beneficiary for items and services excluded from coverage only as described in § 412.42 of this chapter.

(b) *Hospitals participating in State cost control systems or demonstration projects.* A hospital receiving payment for a covered hospital stay under a State cost control system approved under 1886(c) of the Act or in a demonstration project authorized under section 402(a) of Pub. L. 90–248 (42 U.S.C. 1395b–1) or section 222(a) of Pub. L. 92–603 (42 U.S.C. 1395b–1 (note)) may charge a beneficiary for noncovered services as follows:

(1) For the custodial care and medically unnecessary services described in § 412.42(c) of this chapter, after the conditions of § 412.42 (c)(1) through (c)(4) are met; and.

(2) For all other services in accordance with the applicable rules described in Part 489 of this chapter.

B. Subpart D is amended as follows:

Subpart D—Principles of Reimbursement for Providers, Outpatient Maintenance Dialysis, and Services by Hospital Based Physicians

1. The authority citation for Subpart D continues to read as follows:

Authority: Secs. 1102, 1814(b), 1815, 1833(a), 1861(v), 1871, 1881, 1886, and 1887 of the Social Security Act as amended (42 U.S.C. 1302, 1395f(b), 1395g, 1395l(a), 1395x(v), 1395hh, 1395rr, 1395ww, and 1395xx).

2. Section 405.463 is amended by revising paragraphs (c)(3)(i) and (f)(1) to read as follows:

§ 405.463 Ceiling on rate of hospital cost increases.

* * * * *

(c) *Procedure for establishing the ceiling (target amount).* * * *

(3) *Target rate percentage.* (i) The applicable target rate percentage will be the prospectively determined percentage, published by HCFA, based on the estimated increase in the market basket index for the calendar year adjusted by other factors as determined by the Secretary.

* * * * *

(f) *Exemptions*—(1) *New hospitals.* New hospitals that receive approval from HCFA are exempt from the rate of increase ceiling imposed under this section. For purposes of this section, a new hospital is a provider of inpatient hospital services that has operated as the type of hospital for which HCFA granted it approval to participate in the Medicare program, under present and previous ownership, for less than three full years. This exemption expires at the end of the first cost reporting period beginning at least two years after the hospital accepts its first patient.

* * * * *

II. Part 412 is amended as follows:

PART 412—PROSPECTIVE PAYMENT SYSTEM FOR INPATIENT HOSPITAL SERVICES.

A. The authority citation for Part 412 continues to read as follows:

Authority: Secs. 1102, 1871, and 1886 of the Social Security Act (42 U.S.C. 1302, 1395hh, 1395ww).

B. The table of contents of part 412 is amended by adding the title of a new § 412.10 to Subpart A and removing the title of § 412.45 from Subpart C to read as follows:

Subpart A—General Provisions

Sec.

* * * * *

412.10 Changes in the DRG classification system.

* * * * *

C. A new § 412.10 is added to Subpart A to read as follows:

Subpart A—General Provisions

* * * * *

§ 412.10 Changes in the DRG classification system.

(a) *General rule.* Except as specified in paragraph (b) of this section, HCFA issues changes to the DRG classification system in the annual notice of prospective rates published in accordance with § 412.8(b). The DRG changes will be effective with discharges occurring on or after the same date the payment rates are effective.

(b) *Interim changes in the DRG classification system.* HCFA may find it necessary to make changes to the DRG classification system during the Federal fiscal year. These changes are limited to those that meet the criteria in paragraph (c) of this section and that need to be made in order to—

(1) Incorporate into the prospective payment system new items and services that become covered under Medicare; or

(2) Correct a serious omission or inequity in the DRG classification system.

(c) *Criteria for interim changes.* HCFA makes interim changes to the DRG classification system as described in paragraph (b)(2) of this section only if failure to make the changes would have—

(1) A potential adverse impact on the health and safety of beneficiaries; or

(2) A significant and unwarranted fiscal impact on hospitals or the Medicare program.

(d) *Publication of interim changes.* For changes that are made during the Federal fiscal year under paragraphs (b) and (c) of this section, HCFA—

(1) Issues the change through its administrative issuance system and makes the change effective as soon as is administratively feasible; and

(2) Publishes the change for public comment in the next annual notice of prospective payment rates in accordance with § 412.8(b)(2).

(e) *Basis for changes in the DRG classification system.* All changes in the DRG classification system are made using the principles established for the DRG system. This means that cases are classified so each DRG is—

(1) Clinically coherent; and

(2) Embraces an acceptable range of resource consumption.

D. Supbart B is amended as follows:

Subpart B—Hospital Services Subject to and Excluded from the Prospective Payment System

1. In § 412.23, the introductory text in paragraph (c) is revised to read as follows:

§ 412.23 Excluded hospitals: Classifications.

* * * * *

(c) *Alcohol/drug hospitals.* An alcohol/drug hospital is excluded from the prospective payment system for cost reporting periods beginning before October 1, 1985, if it meets the following requirements:

* * * * *

2. In § 412.32, the introductory text is revised to read as follows:

§ 412.32 Distinct part alcohol/drug units: Additional requirements.

In order to be excluded from the prospective payment system for cost reporting periods beginning before October 1, 1985, a distinct part alcohol/drug unit must meet the following requirements:

* * * * *

E. Subpart C is amended as follows:

Subpart C—Conditions for Payment Under the Prospective Payment System

1. In Subpart C, all occurrences of the phrase "medical review entity" are revised to read "PRO".

2. In § 412.42, paragraphs (c)(2), (c)(3)(iv), (d)(3), and (d)(4) are revised to read as follows:

§ 412.42 Limitations on charges to beneficiaries.

* * * * *

(c) *Custodial care and medically unnecessary inpatient hospital care.* * * *

(2) The attending physician agrees with the hospital's determination in writing (for example, by issuing a written discharge order). If the hospital believes that the beneficiary does not require inpatient hospital care but is unable to obtain the agreement of the physician, it may request an immediate review of the case by the PRO. Concurrence by the PRO in the hospital's determination will serve in lieu of the physician's agreement.

(3) * * *

(iv) The determination of the PRO made after the beneficiary received the purportedly noncovered services will be appealable by the hospital, the attending physician, or the beneficiary under the appeals procedures that apply to PRO determinations affecting Medicare Part A payment; and

* * * * *

(d) *Medically unnecessary diagnostic and therapeutic services.* * * *

(3) If the beneficiary receives the services, a formal determination on the validity of the hospital's finding is made by the intermediary and, to the extent that the decision requires the exercise of medical judgment, the PRO.

(4) The determination is appealable by the hospital, the attending physician, or the beneficiary under the appeals procedure that applies to determinations affecting Medicare Part A payment.

* * * * *

3. In § 412.44, the introductory text is revised to read as follows:

§ 412.44 Medical review requirements: Admissions and quality review.

Beginning on November 15, 1984, a hospital must have an agreement with a PRO to have the PRO review, on an ongoing basis, the following:

* * * * *

§ 412.45 [Removed]

4. Section 412.45 is removed.

5. Section 412.48(b) is revised to read as follows:

§ 412.48 Denial of payment as a result of admissions and quality review.

* * * * *

(b) When payment with respect to admission of an individual patient is denied by a PRO under paragraph (a)(1) of this section, and liability is not waived in accordance with §§ 405.330 through 405.332 of this chapter, notice and appeals are provided under procedures established by HCFA to implement the provisions of section 1155 of the Act, Right to Hearing and Judicial Review.

* * * * *

F. Subpart F is amended as follows:

Subpart F—Payment for Outlier Cases

1. In § 412.82, the introductory text of paragraph (b) is revised to read as follows:

§ 412.82 Payment for extended length of stay cases (day outliers).

* * * * *

(b) The PRO must review and approve to the extent required by HCFA—

* * * * *

2. Section 412.84 is amended by revising paragraph (b); adding new paragraphs (c), (d), and (e); redesignating current paragraphs (c), (d), (e), and (f) as paragraphs (f), (g), (h), and (i) respectively; revising the introductory language of newly redesignated paragraph (f); and by revising newly redesignated paragraph (i) to read as follows:

§ 412.84 Payment for extraordinarily high cost cases (cost outliers).

* * * * *

(b) The hospital must request additional payment—

(1) With initial submission of the bill; or

(2) Within 60 days of receipt of the intermediary's initial determination.

(c) Except as specified in paragraph (e) of this section, an additional payment for a cost outlier case is made prior to medical review.

(d) As described in paragraph (f) of this section, the PRO reviews a sample of cost outlier cases after payment. The charges for any services identified as noncovered through this review will be denied and any outlier payment made for these services will be recovered.

(e) If the PRO finds a pattern of inappropriate billing by a hospital, all cost outlier cases from that hospital may be subject to medical review prior to payment until the PRO determines that appropriate corrective actions have been taken.

(f) The PRO reviews the cost outlier cases, using the medical records and itemized charges, to verify the following:

* * * * *

(i) The additional payment amount will be derived by first taking 60 percent of the difference between the hospital's adjusted cost for the discharge (as determined under paragraph (g) of this section) and the threshold criteria established under § 412.80(a)(2). The resulting amount will then be multiplied by the applicable Federal portion of the blend as indicated in § 412.82(c).

G. In Subpart G, § 412.96 is amended by revising the title of paragraph (b), the title and the introductory text of paragraph (c), and paragraphs (c)(1), (c)(2), and (f), and adding a new paragraph (g) to read as follows:

Subpart G—Special Treatment of Certain Facilities

* * * * *

§ 412.96 Special treatment: Referral centers.

* * * * *

(b) *Criteria for cost reporting periods beginning on or after October 1, 1983.*

* * * * *

(c) *Alternative criteria for cost reporting periods beginning on or after October 1, 1985.* For cost reporting periods beginning on or after October 1, 1985, a hospital that does not meet the criteria of paragraph (b) of this section is classified as a referral center if it is located on a rural area (as defined in § 412.62(f)) and meets the criteria specified in paragraphs (c)(1) and (c)(2) of this section and at least one of the three criteria specified in paragraphs (c)(3), (c)(4), and (c)(5) of this section.

(1) *Case-mix index.* The hospital's case-mix index for the cost reporting period prior to the one for which the hospital is seeking referral center status must meet one of two criteria relating to the level of the case mix as described in each year's annual notice of prospective payment rates published under § 412.8(b). The methodology HCFA uses to calculate these criteria is described in paragraph (g) of this section.

(2) *Number of discharges.* For the hospital's most recently completed cost reporting period, its number of discharges (excluding discharges from subprovider and newborn units) is at least—

(i) 6,000; or

(ii) Equal to the median number of discharges for urban hospitals for the census region in which the hospital is located as set forth in each year's annual notice of prospective payment rates published under § 412.8(b).

* * * * *

(f) *HCFA review of referral center status.* The status of each hospital that is receiving a referral center adjustment will be reviewed by the HCFA regional office every three years to determine if the hospital continues to meet the criteria set forth in paragraphs (b) or (c) of this section. If the determination is to the effect that the hospital no longer qualifies for a referral center adjustment, the adjustment will be discontinued beginning on the first day of the hospital's next cost reporting period.

(g) *Methodology for calculating case-mix index criteria.* HCFA calculates the national and regional case-mix index value criteria as described in paragraph (g)(1) through (g)(5) of this section.

(1) *National criterion.* HCFA calculates a national case-mix index value for all hospitals that participate in the Medicare program and compares it to the 1981 case-mix criterion of 1.03. The percentage of change between those two figures is used to update the national standard.

(2) *Regional criterion.* HCFA calculates the median urban case-mix index values for each census region by updating the 1981 regional criterion using the percentage of change that is calculated under paragraph (g)(1) of this section.

(3) *Source of data.* In making the calculations described in paragraphs (g)(1) and (g)(2) of this section, HCFA uses all inpatient hospital bills received through at least the midpoint of the Federal fiscal year before the year in which the criteria will be effective.

(4) *Effective date.* HCFA sets forth the national and regional criteria in the annual notice of prospective payment rates published under § 412.8(b). These criteria are effective for cost reporting periods beginning on or after October 1 of the Federal fiscal year to which the notice applies.

(5) *Applicability of criteria to HCFA review of referral center status.* For purposes of the triennial HCFA review of a referral center's status, as described in paragraph (f) of this section, the referral center's case-mix index value for a cost reporting period is evaluated

using the updated case-mix index value criteria published for the Federal fiscal year after the one in which that cost reporting period began.

H. In Subpart H, § 412.118, the introductory text of the section is revised; the introductory text of paragraph (a) is reprinted for the convenience of the reader; paragraph (a)(1) is revised; a new paragraph (b) is added; current paragraphs (b) through (e) are redesignated as paragraphs (c) through (f) respectively; and newly redesignated paragraphs (d)(3), (e)(2), (e)(4), and (f) are revised; and a new paragraph (g) is added to read as follows:

Subpart H—Payments to Hospitals Under the Prospective Payment System

* * * * *

§ 412.118 Determination of indirect medical education costs.

For cost reporting periods beginning on or after October 1, 1984, to determine the indirect medical education costs, HCFA uses the following procedures:

(a) *Basic data.* HCFA determines for each hospital its—

(1) Ratio of full-time equivalent interns and residents to number of beds (as determined in paragraph (b) of this section), excluding those interns and residents in anesthesiology who are employed to replace anesthetists; and

* * * * *

(b) *Determination of number of beds.* For purposes of this section, the number of beds in a hospital is determined by counting the number of available bed days during the cost reporting period, not including beds assigned to newborns and excluded distinct part hospital units, and dividing that number by the number of days in the cost reporting period.

* * * * *

(d) *Determination of payment amount.* * * *

(3) The education adjustment factor determined under paragraph (c) of this section.

(e) *Count of interns and residents.* * * *

(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 interns and residents assigned to the hospital and providing services to the hospital on September 1 of that year. 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 intern and resident.

(3) No intern or resident will be counted as more than one full-time employee on the date counted, regardless of the number of hospitals in which he or she is providing services.

(4) Fiscal intermediaries must verify the correct count of interns and residents and may review the hospital's entire cost reporting period.

(f) *Limits on count of interns and residents.* Interns and residents who are assigned to and providing services to both a hospital and either a freestanding family practice center, the outpatient department of the hospital, or an excluded distinct part hospital unit on the day that the count of interns and residents (as described in paragraph (e)(2)(i)) is made are not counted as full-time equivalents. Only the percentage of time that these interns and residents spend in the portion of the hospital subject to the prospective payment system on the day the count is made is used to determine the indirect medical education adjustment.

(g) *Intermediary review.* 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 interns and residents to beds ratio for purposes of the final indirect medical education payment.

(Catalog of Federal Domestic Assistance Programs No. 13.773, Medicare—Hospital Insurance)

Dated: May 17, 1985.

Carolyne K. Davis,

Administrator, Health Care Financing Administration.

Approved: May 24, 1985.

Margaret M. Heckler.

Secretary.

Editorial Note: The following addendum and appendixes will not appear in the Code of Federal Regulations.

Addendum—Proposed Schedule of Standardized Amounts Effective With Discharges on or After October 1, 1985, and Update Factors and Target Rate Percentages Effective With Cost Reporting Periods Beginning on or After October 1, 1985

I. Summary and Background

In this addendum, we are proposing changes in the methods, amounts, and factors for determining prospective payment rates for Medicare inpatient hospital services during the third and final year of the transition period of the prospective payment system. In addition, we are proposing new target rate percentages for determining the rate-of-increase limits (target amounts) for hospitals excluded from the prospective payment system.

Under the prospective payment system, for hospital cost reporting periods beginning October 1, 1985 through September 30, 1986, except for sole community hospitals, each hospital's payment per discharge will be the sum of a Federal portion that is 75 percent of the Federal rate and a hospital-specific portion that is 25 percent of the hospital-specific rate (section 1886(d)(1)(C) of the Act). Sole community hospitals will continue to be 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. We note that, while the changes to the hospital-specific portion of the prospective payment rate are determined on the basis of cost reporting periods, the changes to the Federal portion are determined on the basis of the Federal fiscal year (FY).

During FY 1986, the Federal rates will be comprised of a blend of 50 percent of the national rate and 50 percent of the appropriate regional rate as required by section 1886(d)(1)(D) of the Act. During the first year of the transition period (that is, FY 1984), the Federal rates were comprised solely of the regional rate. During the second year, FY 1985, the Federal rates are comprised of a blend of 25 percent of the national rate and 75 percent of the regional rate.

As discussed in section II below, we are proposing changes in the determination of the prospective payment rates. The method for determining these rates was published in an interim final rule on September 1, 1983 (48 FR 39752) and modified in final rules published on January 3, 1984 (49 FR 234) and August 31, 1984 (49 FR 34728). The proposed changes, to be made prospectively, would affect the calculation of both the Federal rates (adjusted standardized amounts) and the hospital-specific rates that are used to determine transition period prospective payment rates. As part of these changes, we would incorporate adjustments for the updated market basket index and additional adjustments as authorized under section 1886(e)(4) of the Act.

Section III, below, sets forths our proposed changes in determining the rate-of-increase limits for hospitals excluded from the prospective payment system. Section IV contains the tables referred to throughout the preamble to the proposed rule and this addendum.

II. Proposed Change to prospective Payment Rates and DRG Weighting Factors for FY 1986

The basic methodology for determining Federal regional and national prospective payment rates is set forth at §412.63, and for hospital-specific rates is set forth in §412.73. Below we discuss the manner in which are proposing to change some of the factors or methodology used for determining the prospective payment rates. Note that these proposed changes are supported by new studies and data, and that we plan to consider public comments, further studies and even more recent data before issuing final rates, in order to ensure that the final rates are based on the best information and data available at the time. Modifications in response to comments or inclusion of more recent data in the proposed methodology and adjustment factors may result in changes to these proposed rates, including the wage indexes and DRG weights. The Federal rate changes and revised wage index and DRG weights, once issued as final, would be effective with discharges occurring on or after October 1, 1985. Updated hospital-specific rates would be effective for hospital cost reporting periods beginning on or after October 1, 1985.

In summary, we are proposing to establish the FY 1986 Federal rates (that is, the standardized amounts set forth in Table 1, below) by:

- Restandardizing the base year cost data for revised wage index values (described in section II.A.1.);
- Grouping the standardized amounts by urban/rural averages for the nine census regions and the nation, reflecting the most recent geographic designations (described in section II.A.2.);
- Updating the standardized amounts by zero percent, after considering certain factors that resulted in payment rates for FY 1985 that were overstated by 6.2 percent, the forecasted FY 1986 market basket increase of +4.85 percent, and a policy target adjustment factor of −1.5 percent (described in section II.A.3.); and
- Applying the same adjustment factors for Part B costs, FICA taxes, nonphysician anesthetist costs, and outlier payments as were used for FY 1985 (described in section II.A.4).

Further, we propose, for cost reporting periods beginning in FY 1986, not to increase either the hospital-specific rates, for hospitals under the prospective payment system, or the rate-of-increase limits (target amounts), for hospitals excluded from the prospective payment system. In addition, the proposed rule incorporates the survey-based gross wage index, and new DRG weights and outlier criteria, which are included in the tables in section IV, below.

Although we believe the standardized amounts for FY 1985 were so overstated that a significant reduction could be justified, we are not proposing to reduce them for FY 1986. Rather, we propose to maintain them at the same average level as the FY 1985 payment rates. Thus, the amounts in Table 1 differ from the FY 1985 standardized amounts only as a result of restandardization to reflect the proposed new wage index. Section II.A.3., below, discusses our reasons for maintaining the FY 1986 Federal rates at the FY 1985 level.

We recognize that our proposed FY 1986 standardized amounts are not in accord with ProPAC's Recommendation 1. That recommendation reads as follows:

> For fiscal year 1986, the standardized amounts should be updated by the projected increase in the hospital market basket, minus one percentage point, plus an allowance for the estimated increase in real case-mix complexity during fiscal year 1985. The negative one percentage point is a combined adjustment of a positive allowance for scientific and technological advancement and a negative allowance for productivity improvement and hospital product change.
>
> This recommendation reflects the Commission's collective judgment of the appropriate increase in the level of payment per Medicare discharge under PPS, assuming that the Commission's other concerns regarding the market basket component of the update factor, the DRG weighting factors, and the distribution of payments across PPS hospitals are also addressed in the fiscal year 1986 payment rates. Further, this recommendation is based on the premise that no net reductions or increases in average per case payments to hospitals will be effected through measures other than the update factor, such as reducing the indirect teaching adjustment, incorporating capital payment under PPS at a budget-saving level, adjusting for coding changes occurring before fiscal year 1985, or any other changes in total payments per discharge under PPS.

Our rationale for differing with this recommendation is set forth below, in the point-by-point discussion of how we are setting the proposed standardized amounts for FY 1986. Basically, our conclusion, like ProPAC's recommendation, is a summary conclusion that depends on resolution of many specific issues in the rate-setting process.

A. Calculation of Adjusted Standardized Amounts

1. Standardization and Restandardization of Base Year Costs Per Case Used in Calculation of Federal Rates

Section 1886(d)(2)(A) of the Act requires the establishment of base year cost data containing allowable operating costs per discharge of inpatient hospital services for each hospital. The preamble to the interim final rule, published September 1, 1983 (48 FR 39763), contains a detailed explanation of how base year cost data are established and how they are used in computing the Federal rates.

Section 1886(d)(2)(C) of the Act requires that the updated base year per discharge costs be standardized in order to remove from the cost data the effects of certain causes of variation in cost among hospitals. These include case-mix, wage levels, cost of living, and indirect medical education costs. We have decided to restandardize the base year costs to reflect the proposed survey-based wage index. However, for the reasons given below, we are not proposing to restandardize for other causes of cost variation.

ProPAC recommends that the standardized amounts be rebased in the future using cost data which reflect hospital behavior under the prospective payment system, and that we implement a process to collect the necessary cost data. This would reduce the need to determine annually whether or not changes made since the base period costs were collected should be reflected through restandardization.

We do not believe that section 1886(d) of the Act contemplates rebasing the standardized amounts. Rather, it directs that the rates be updated annually. However, there has been much discussion concerning the desirability of rebasing the standardized amounts so that they are more reflective of hospital behavior under the prospective payment system. There has been concern that changes in hospital behavior, such as shorter lengths of stay and shifts of services to the outpatient setting, are difficult to quantify as part of the annual update because of the limited amount of data available to estimate the effects of these factors. Since rebasing the standardized amounts would automatically reflect changes in hospital behavior under the prospective payment system, it may be appropriate to consider such rebasing in the future.

If we determine that the standardized amounts should be rebased, we expect appropriate cost data will become

available through our Hospital Cost Report Information System (HCRIS). HCRIS is our national data base for all hospital cost report data. It is an automated data collection, processing, and report generation system that contains hospital financial and statistical data. Currently, HCRIS contains data for cost reporting periods ending on or after January 1, 1982 through periods ending on September 29, 1983, and we are expecting soon to begin including data from cost reporting periods subject to the case-mix adjusted cost limits and rate-of-increase limits imposed by sections 1886 (a) and (b) of the Act. Thus, there will be some lag before prospective payment cost report data are available.

a. *Adjustments for Variation in Hospital Wage Levels.* Section 1886(d)(2)(C)(ii) of the Act requires that the updated amounts be standardized by adjusting for variations among hospitals in the average area hospital wage level. Therefore, the updated average cost per discharge is divided into labor-related and nonlabor-related portions. We established labor and nonlabor portions, based on the labor and nonlabor components of the hospital market basket, and standardized the labor portion of the FY 1984 and FY 1985 standardized amounts using the Bureau of Labor Statistics' (BLS) area wage index. However, adoption of a new wage index (discussed in section III of the preamble of this proposed rule) would require us to restandardize the base year costs used to calculate the standardized amounts. Therefore, we have removed the effect of the previous standardization for each hospital's BLS wage index by multiplying each hospital's average cost per discharge value by the old index and restandardized the amounts by dividing that result by the survey-based gross wage index.

b. *Variations in Case Mix Among Hospitals.* Section 1886(d)(2)(C)(iii) of the Act requires that the updated amounts be standardized to adjust for variations in case mix among hospitals. The methodology used for determining the appropriate adjustment factor (that is, the case-mix index) is explained in the September 1, 1983 interim final rule (48 FR 39766–39771). A case-mix index has been calculated for each hospital based on 1981 cost and billing data.

Standardization, necessary to neutralize inpatient operating costs for the effects of variations in case mix, is accomplished by dividing the hospital's average cost per Medicare discharge by that hospital's case-mix index. Table 3a, section VII of the addendum to the September 1, 1983 interim final rule (48 FR 39847–39870) contains the case-mix index values used for this purpose for the FY 1984 and 1985 rates.

Because we are proposing to use new charge-based DRG weights for discharges occurring in FY 1986, we considered calculating new case-mix indexes based on 1981 charge data, and using these indexes to restandardize the base year costs used to determine the prospective payment rates. This would be technically the most accurate method for restandardizing the 1981 cost data. However, we found that restandardizing with 1981 charge-based case-mix index values would have a negligible effect on the standardized amounts. Therefore, we have decided, for simplicity, not to restandardize.

c. *Indirect Medical Education Costs.* Section 1886(d)(2)(C)(i) of the Act requires that the updated amounts be standardized for indirect medical education costs. Therefore, in establishing the standardized amounts used to determine the FY 1984 and FY 1985 prospective payment rates, after adjusting each hospital's inpatient operating cost per discharge for inflation and case-mix, we divided each cost by 1.0 plus the product of double the education adjustment factor (5.795 percent, which, when doubled, yields 11.59 percent) and the individual hospital's adjusted intern and resident-to-bed ratio. We determined that adjusted ratio by dividing the hospital's number of full-time equivalent interns and residents for the cost reporting period by the hospital's bed size determined at the beginning of the data base period to obtain the hospital's intern and resident-to-bed ratio, and dividing that ratio by 0.1.

If we were to revise the education adjustment factor, we could propose to adjust the standardized amounts by removing the effect of the old factor, and restandardizing them using the revised factors. However, since we are not revising the education factor, there is no need to restandardize.

d. *Cost-of-Living Factor for Alaska and Hawaii.* Section 1886(d)(5)(C)(iv) of the Act authorizes the Secretary to provide for such adjustments to the payment amounts as the Secretary deems appropriate to take into account the unique circumstances of hospitals located in Alaska and Hawaii.

Generally, these two States have higher levels of cost in comparison to other States in the nation. The high cost of labor is accounted for in the wage index adjustments discussed above. However, the high cost-of-living in these States also affects the cost of nonlabor items (for example, supplies and equipment). Therefore, in order to remove the effects of the higher nonlabor costs from the overall cost data (that is, for standardization purposes), the nonlabor portion of the average cost per Medicare discharge in hospitals located in Alaska and Hawaii is divided by an appropriate cost-of-living adjustment factor. The factors used for this adjustment have not changed from FY 1985; therefore, we do not plan to restandardize the base-year cost data for cost-of-living adjustments. If new adjustment factors are issued before we publish the final rates, we will consider whether it is necessary to restandardize using the new factors. The table below presents the most recent cost-of-living adjustment factors.

Table of Cost-of-Living Adjustment Factors, Alaska and Hawaii Hospitals

Alaska—All areas	1.25
Hawaii:	
Oahu	1.20
Kauai	1.175
Maui	1.20
Molokai	1.20
Lanai	1.20
Hawaii	1.10

(The above factors are based on data obtained from the U.S. Office of Personnel Management, published in their FPM–591 letter series.)

2. Grouping of Urban/Rural Averages Within Geographic Areas

Under section 1886(d)(2)(D) of the Act, the average standardized amounts per discharge must be determined for hospitals located in urban and rural areas of the nine census divisions and the nation.

For FY 1986 the Federal rates will be comprised of 50 percent of the national rate and 50 percent of the regional rate (section 1886(d)(1)(D) of the Act). Therefore, Table 1 contains 20 standardized amounts (ten urban amounts and ten rural amounts further divided into labor-related and nonlabor-related portions). The methodology for computing the national average standardized amounts is identical to the methodology for determining the regional amounts, except that the national urban and rural groups include hospitals from all urban or rural geographic areas, respectively.

EOMB may announce revised listings of the MSA and New England County Metropolitan Area (NECMA) designations that are used in calculating the standardized amounts. If EOMB makes the announcement before we issue the final rule, we will list the revised MSA/NECMA designations in

the addendum to the final rule. As stated in the January 3, 1984 final rule (49 FR 253), these changes in designation will not be recognized in the prospective payment rates until the beginning of each new Federal fiscal year following the announced changes. It should be noted, however, that Pub. L. 98-473, enacted October 12, 1984, changed the designation of the St. Louis MSA. The proposed wage index (as well as the standardized amounts) included in this proposed rule incorporates this change, which would be effective October 1, 1985 for prospective payment purposes.

3. Updating the Average Standardized Amounts

a. *Legal Requirements.* The basic legal requirements governing the method by which the average standardized amounts are updated are set forth at section 1886(d)(3)(A) of the Act, as follows:

(A) UPDATING PREVIOUS STANDARDIZED AMOUNTS.—The Secretary shall compute an average standardized amount for hospitals located in an urban area and for hospitals located in a rural area within the United States and for hospitals located in an urban area and for hospitals located in a rural area within each region, equal to the respective average standardized amount computed for the previous fiscal year under paragraph (2)(D) or under this subparagraph, increased for fiscal year 1985 by the applicable percentage increase under subsection (b)(3)(B), and adjusted for subsequent fiscal years in accordance with the final determination of the Secretary under subsection (e)(4), and adjusted to reflect the most recent case-mix data available.

In accordance with section 1886(d)(3)(A) of the Act, we are proposing to adjust the urban and rural average standardized amounts using the applicable percentage as determined by the Secretary in accordance with section 1886(e)(4) of the Act. That section reads as follows:

(4) Taking into consideration the recommendations of the Commission [that is, the Prospective Payment Assessment Commission, or ProPAC], the Secretary shall determine for each fiscal year (beginning with fiscal year 1986) the percentage change which will apply for purposes of this section as the applicable percentage increase (otherwise described in subsection (b)(3)(B)) for discharges in that fiscal year, and which will take into account amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality.

As prescribed by section 1886(e)(2) of the Act, the Commission, in making its recommendations to the Secretary:

shall take into account changes in the hospital market-basket described in subsection (b)(3)(B), hospital productivity, technological and scientific advances, the quality of health care provided in hospitals (including the quality and skill level of professional nursing required to maintain quality care), and long-term cost-effectiveness in the provision of inpatient hospital services.

Section 1886(b) of the Act sets forth the requirements under which a rate of increase limit (target amount) is established for the inpatient operation costs of hospitals excluded from the prospective payment system. Under this section, a target amount is determined annually for each hospital cost reporting period, based on each hospital's base year cost per case, updated by an "applicable percentage increase."

This "applicable percentage increase" is defined in section 1886(b)(3)(B) as:

one-quarter of 1 percentage point plus the percentage, estimated by the Secretary before the beginning of the period or year, by which the cost of the mix of goods and services (including personnel costs but excluding non-operating costs) comprising routine, ancillary, and special care unit inpatient hospital services, based on an index of appropriately weighted indicators of changes in wages and prices which are representative of the mix of goods and services included in such inpatient hospital services, for such cost reporting period or fiscal year will exceed the cost of such mix of goods and services for the preceding 12-month cost reporting period or fiscal year.

We have used the hospital market basket index as the measure of the cost of goods and services for determining both prospective payment rates and the target amounts applicable to hospitals and units excluded from the prospective payment system. For FY 1986 and subsequent fiscal years, we are required to use the percentage change determined under section 1886(e)(4) of the Act *in place of* this market basket index plus one quarter of one percentage point. However, section 1886(b)(5)(B) specifies that for FY 1986, the percentage determined under section 1886(e)(4) may not exceed the applicable percentage increase that would otherwise be determined for that period. (Note that, under the statute, from FY 1986 on the percentage determined by the Secretary under section 1886(e)(4) will be applied to *both* the prospective payment rates and the target amounts (rate of increase limits) applicable to hospitals and units excluded from the prospective payment system.)

b. *Factors Considered in Determining the Proposed FY 1986 Update.* As is clear from the discussion of the legal requirements for establishing the FY 1986 update, we must consider at least the following factors in addition to the hospital market basket index: hospital productivity, technological and scientific advances, quality of care, cost-effectiveness, and case-mix data. In addition, we believe we should consider prior years' experience.

Since the standardized amounts for FY 1985 are used as the basis for the determination of rates for later years, the level of the FY 1985 standardized amounts must be corrected for any experience that developed since they were published. We believe that it is necessary, each year, to review the appropriateness of the level of the previous year's prospective payment rates for providing reasonable payment for inpatient hospital services furnished to beneficiaries. Further, this review must include assessment of whether the previous year's propsective payment rates have established adequate incentives for the efficient and effective delivery of needed care.

In addition to this general consideration, the FY 1985 adjusted average standardized amounts (Federal rates) were required by law to be adjusted to achieve budget neutrality, that is, to ensure that aggregate payments for the operating costs of inpatient hospital services would be neither more nor less than we estimated would have been paid under prior legislation for the costs of the same services. (The technical explanation of how this adjustment was made was published at 49 FR 34791, August 31, 1984.) These budget neutrality-adjusted rates for FY 1985 are then to be used as the basis for the determination of rates for later years.

Our FY 1985 budget neutrality adjustment factors were based on data and assumptions that resulted in standardized amounts that were higher than necessary to achieve budget neutrality.

Therefore, we believe that the FY 1986 standardized amounts should be established by a methodology that takes into account the prior year's overstatement. To this end, we have identified several factors, discussed in section II.A.3.c., below, that contributed to the overstatement of the FY 1985 standardized amounts. We have determined an appropriate percent value for each of them, and have combined them into a proposed composite correction factor for FY 1986 which equals −6.2 percent.

In addition, we have developed factors representing productivity, technological advances, and the elimination of ineffective practice patterns, which is necessary to ensure the cost-effective delivery of care. Each of these factors interacts with the

others, to some extent, and has an impact on the quality of care. We have determined an appropriate percent value for each of these factors, making conservative assumptions and with regard to their potential effect on quality, and have combined these values into a proposed composite policy target adjustment factor, as discussed in section II. A.3.e., below. For FY 1986, this factor would equal −1.5 percent.

Since the forecasted hospital market basket increase for FY 1986 is +4.85 percent, it is clear that there is a potential justification of a −2.85 percent decrease in the FY 1986 standardized amounts, as compared to those for FY 1985. We have, however, for the reasons discussed in section II. A.3.f., below, decided that such a decrease is undesirable. Therefore, we are proposing to maintain the FY 1986 standardized amounts at the same average level as FY 1985, in effect applying a zero percent update factor.

c. *Corrections for Prior Years' Experience*—(1) *Case mix.* Using patient bill data received through April 1985, and using the FY 1984 relative DRG weights, we have determined that the average case-mix index for hospitals under the prospective payments system has increased 9.6 percent over the 1981 MEDPAR level. We have previously taken 4.47 percent of this case-mix increase into account by adjusting the original FY 1984 standardized amounts by 3.38 percent and reducing the FY 1985 DRG weights by 1.05 percent. (The relationship of these percent changes is multiplicative, rather than additive; that is 1.0338 x 1.0105 = 1.0447.) Thus, the observed case-mix increase to date is 4.9 percent greater than the total prior adjustment (1.096 divided by 1.0447 = 1.049).

Under budget neutrality, these increases in case-mix should not have increased payments to hospitals. The point at issue here is not whether these increases are legitimate or result from "case-mix creep," but whether they would have been recognized under cost reimbursement under prior legislation. As explained in the final rule published August 31, 1984 (49 FR 34770–34775), case-mix increases such as those we have experienced under the prospective payment system would not have resulted in comparable increases in aggregate payments under the case-mix adjusted cost limits and rate of increase limits established under the Tax Equity and Fiscal Responsibility Act of 1982 (Pub. L. 97–248).

Moreover, since real case mix increases result in increased costs per case, we believe that the estimates we made of FY 1984 and FY 1985 cost per case increases for purposes of budget neutrality already incorporated an implicit reognition of the real increase in average case mix that would have occurred regardless of the implementation of the prospective payment system. Hence, we must adjust the standardized amounts downward by 4.9 percent.

Several ProPAC recommendations concerned how increases in case mix should be reflected in determining rates and DRG weights. In Recommendations 1 and 11, ProPAC urged that prospective payments to individual hospitals and in the aggregate should reflect real changes in case mix. In Recommendation 11, it noted that changes in reported case mix that are unrelated to actual differences in the types of patients treated should not be built into future prospective payment rates. In Recommendation 17, which dealt primarily with recalibrating the DRG weights, ProPAC recommended that, for FY 1986, the effects of case mix changes in FY 1985 should be removed from the DRG weights through normalization of the average case weights.

We are in agreement, in principle, that aggregate prospective payments should reflect only "real" changes in case mix but not case mix changes unrelated to actual differences in the types of patients treated. The correction of the standardized amounts discussed above is intended to accomplish this, as well as to preserve the requirement for budget neutrality. However, we do not propose to accept or implement ProPAC's technical recommendation on how to accomplish this.

In particular, we do not agree with ProPAC's position concerning adjustment only for case mix changes occurring during FY 1985. We believe the adjustment should also reflect previously unaccounted for changes in case mix prior to FY 1985. This is because our failure to account for all demonstrable changes in case mix in the development of the budget neutrality adjustment in the prior year resulted in FY 1985 standardized amounts which were overstated. We believe it is essential to adjust the standardized amounts, as the basis for determining the rates for future years, for the amount overstated due to unaccounted for changes in case mix. Therefore, since it is necessary to correct the standardized amounts to the base level that would have achieved budget neutrality, we are proposing to make the case mix correction to the Federal rates rather than through the recalibration of the DRG weights, as recommended by ProPAC.

Our method of normalization of the DRG weights must avoid doubly adjusting for "case-mix creep" in both the rates and the DRG weights, especially in view of the reduction of the FY 1985 DRG weights to take some case-mix increase into account. Since we have adjusted the proposed Federal rates for case-mix increases not previously taken into account, using the most recent available data, we have normalized the proposed DRG weights so that, for the data base used to recalibrate, the weight for the average case using the proposed weights is the same as the weight for the average case using the published FY 1985 weights. Thus, the proposed weights would still reflect the 1.05 percent FY 1985 reduction.

We also agree with ProPAC, in principle that prospective payments should reflect increases in real case mix. However, we do not believe that incorporating an add-on factor to the proposed FY 1986 standardized amounts, as recommended by ProPAC (Recommendations 1 and 17), is necessary to achieve this result. As our billing data show, hospitals have already received the benefit of both real case-mix increases and coding improvements. ProPAC's recommendation is equivalent to proposing an add-on for estimated future case mix increase *in addition to* the increased payments hospitals will continue to receive as a result of assignment of cases in higher weighted DRGs.

RAND Corporation recently did a study for us intended to answer the question: "What percentage of the increase in case mix can be attributed to a truly sicker mix of Medicare inpatients?"

The major conclusions are as follows:

- Total increase in case mix (FY 1984 prospective payment bills over calendar year 1981 MEDPAR) was 8.4 percent, based upon data received through mid-December 1984.
- 2.2 percentage points of the 8.4 percent increase came from medical practice changes composed of 1.6 percentage points for the general trend (technology and a larger share of patients in higher intensity DRGs) and 0.6 percentage points for the shift of many DRG 39 (lens implant) cases to outpatient. The effect of shifting other DRG cases to outpatient sites was negligible.
- There was no increase due to the aging of the Medicare inpatient population over the three-year period.
- 6.1 percentage points of the 8.4 percent increase came from coding

practice changes. 3.4 percentage points of this increase resulted from limitations of the MEDPAR data, and 2.6 percentage points were induced by the payment incentives of the prospective payment system for more accurate coding.

• Even though 2.2 percentage points of the case mix increase resulted from medical practice changes, the amount of the increase in case-mix that should have been passed through in FYs 1984 and 1985, when budget neutrality was in effect, would have been negligible.

Our estimate of total case-mix increase of 9.6 percent is different from RAND's percent for two reasons:

• We have a more recent update and more data.

• Our number included observed case-mix increases through April 1985, and experience during FY 1985, whereas the RAND study is limited to FY 1984 cases and bills received through mid-December 1984.

We are continuing to study ways to measure real case-mix increases. To the extent that these studies demonstrate real increases in average case mix that would not be reflected in prospective payments otherwise, and enable us to accurately measure and estimate the future magnitude of such increases, we would expect to reflect them in the level of prospective payments for FY 1987 or later.

(2) *Market basket.* The forecasted hospital market basket increase factors used to calculate the FY 1985 standardized amounts were 6.2 percent for 1983, 6.0 percent for 1984, and 6.5 percent for 1985. Our latest hospital market basket factors, as of February 1985, reflect more actual experience than those available at the time the FY 1985 rates were published. The most recent factors are 6.3 percent for 1983, 5.7 percent for 1984, and 4.7 percent for 1985. Using these latest market basket factors for correction of the standardized amounts would reduce them by 1.3 percent. We expect to have even more recent and accurate factors available at the time we publish final FY 1986 standardized amounts, and will use those factors in making corrections to the standardized amounts. This proposal is generally consistent with ProPAC's Recommendation 7.

Eight out of 21 ProPAC recommendations dealt with market basket issues. Recommendation 3 related to excluded hospitals and units, and is discussed in section III of this addendum. Recommendations 2, 4, 5, 6, and 9 are discussed in section V.A. of the preamble to this proposed rule. Recommendations 7 and 8 are discussed in this section.

In their seventh recommendation, ProPAC suggested that we make a correction for market basket forecast errors, as follows:

> The update factor should include a correction for substantial errors made in the previous year's forecast of changes in the external price measures used in the hospital market basket. In the judgment of the Commission, substantial errors are those that equal or exceed 0.25 percentage points (or, when rounded in the published forecasts, 0.3 percentage points). The Commission will undertake a study to determine the extent to which differences between forecasted and actual increases in the internal price change measures are due to factors beyond the hospitals' control. Substantial errors determined after study to be due to factors beyond the hospitals' control should be corrected in the update factor.

As already noted, we are proposing to correct forecast errors. However, ProPAC specifically recommends that we correct only for error related to external price measures, whereas we are proposing to correct for all errors, whether related to external or internal measures. Nearly 58 percent of the market basket relates to internal measures. Correcting only for external measures could adversely affect hospitals if the error was an underestimation of internal price measure increases. At this time, as noted by ProPAC, we cannot differentiate adequately between the effects of forecast error and hospital behavior. We agree with ProPAC that further study should be done to distinguish between them. However, in the absence of such study, to refuse to correct forecast errors related to internal price measures would seem to presume that all of the difference between forecasted and actual increases were attributable to hospital behavior. Therefore, we are proposing to correct for all forecast error.

In Recommendation 8, ProPAC recommends that we seek a statutory change to authorize these forecast error corrections, as follows:

> The Secretary has determined that she does not have the statutory authority to correct for market basket forecast errors. Therefore, the Secretary should seek statutory change to provide explicitly that the update factor include a correction for errors in forecasting the market basket beginning in fiscal year 1986.

We do not agree that the Secretary has determined that she does not have this statutory authority. In the August 31, 1984 final rule we did respond to a related comment as follows:

> *Comment*—One commenter recommended that we adjust the prospective payment rates if our market basket estimates of inflation prove to be inaccurate. In order to preserve the prospective nature of the system, it was suggested that we compensate for market basket forecasting errors by providing for a corresponding adjustment in the rates for the following fiscal year.
>
> *Response*—The main throught of this comment parallels comments raised in previous prospective payment regulations. As we have stated one of the purposes of the prospective payment system is the establishment of known payment rates prospectively.
>
> Therefore we have not adopted the suggestion that the rates be adjusted retroactively. (49 FR 34767)

We still are not proposing to make retroactive adjustments, just as ProPAC has not recommended making retroactive adjustments. We believe that there is ample statutory authority to correct previous market basket forecasting errors *prospectively*. Section 1886(b)(3)(B) of the Act, which sets forth the statutory basis of the market basket index, provides that the index must represent the amount that estimated costs for a given period exceed "the cost of such mix of goods and services" for the preceding period. The point of reference for the projected increase is the *cost* of goods and services, not a previous forecast of the cost of goods and services. We must presume that the Secretary has the authority to consider the most recent measure of that cost, based on the best data available. It would be unreasonable to read the statute as requiring estimation errors to be carried forward indefinitely without adjustment to reflect the actual level of the cost of goods and services. *Not* to correct forecasting errors would risk compounding errors over time, and could result in significant understatement or overstatement of the prospective payment rates. Hence, we believe it is necessary to make corrections of prior years' estimates before proceeding to an estimate of the next year's changes. However, these corrections must be made only to ensure that future rates are set accurately, not to compensate for prior overpayments or underpayments. Thus, we agree with and accept, in general, ProPAC's Recommendation 7.

(3) *Additional causes for the overstatement of FY 1985 Federal rates.* In addition to the factors above, which we believe we must correct, other considerations also contributed significantly to the overstatement of the FY 1985 standardized amounts.

When we set the standardized amounts for FY 1985, we made assumptions on hospital cost per case increases in order to estimate, for purposes of budget neutrality, the

payments that would have been made had prior payment rules continued in effect. These assumed rates of increase in cost per case were 10.9 percent for 1983, 9.8 percent for 1984, and 9.8 percent for 1985. These assumptions were significantly higher than the actuarial estimates. The actuarially estimated rates of increase in cost per case (which ignore any effects of the prospective payment system such as shorter lengths of stay) are 9.8 percent for 1983, 8.1 percent for 1984, and 8.5 percent for 1985. After application of the revised market basket, discussed previously, use of these actuarial estimates would reduce the standardized amounts by an additional 1.3 percent.

For FY 1985, we also used 1981 unaudited, as-submitted cost reports (to get recent data as quickly as possible) to set the Federal rates. The hospital-specific rates were set using later (1982 or 1983) cost reports that were fully audited. The audits adjusted the total cost of these reports downward by $2.2 billion, of which Medicare realized about $900 million in inpatient recoveries. Since the cost data used to set the Federal rates do not reflect audit recoveries, it is likely that they are overstated by a similar amount. We do not know precisely what proportion of this amount applies to capital-related costs and other costs that would not affect the Federal rates. However, approximately 90 percent of hospitals' total inpatient costs are operating costs, and if only 40 percent of the $900 million in audit recoveries is related to Federal payments for inpatient operating costs, there would have been, conservatively estimated, at least a one percent overstatement of allowable costs incorporated into the cost data to determine the FY 1985 standardized amounts.

Both of these causes for the overstatement of the standardized amounts are related to our own procedures and decisions. Thus, they are unlike both the market basket index, which is a technical measure of input prices, and the increases in case-mix, which primarily reflect changes in hospital coding. Further, as discussed below, even without making these corrections we could justify a negative update factor for FY 1986, although we are not proposing one. Since we have decided to propose FY 1986 standardized amounts set at the same level as those for FY 1985, making corrections now to reflect the cost per case assumptions and the audit data would have no practical effect. Therefore, we have decided not to propose at this time to correct the standardized amounts for these factors. We are especially concerned, however, to reexamine in more detail the effects of these problems, particularly of using unaudited data, and their long-term implications for the level of the standardized amounts.

4. Proposed Composite Correction Factor

We are proposing to adjust the standardized amounts as follows to take into consideration the overstatement of the prior year's amounts:

	Percent
Case mix	−4.9
Market basket	−1.3
Composite correction factor	−6.2

d. *Forecast Market Basket Increase.* ProPAC made several recommendations related to the hospital market basket index. Recommendations 7 and 8, which deal with forecasting errors, are discussed above. Their other recommendations are discussed in section V of the preamble to this proposed rule.

We must consider forecasted market basket index increases in determining the percentage increase for both prospective payment rates and rate-of-increase limits (target amounts) for FY 1986 and subsequent fiscal years. However, the percentage change determined under section 1886(e)(4) of the Act does not have to equal the market basket index plus one quarter of one percentage point, although section 1886(b)(3)(B) of the Act does specify that for FY 1986 the percentage determined under section 1886(e)(4) of the Act *may not exceed* the applicable percentage increase that would otherwise be determined for that period.

FORECASTED MARKET BASKET (MB) PERCENT INCREASE PLUS ONE QUARTER OF 1 PERCENTAGE POINT

	MB percentage	MB + 1/4 percentage
Calendar year:		
1985	4.7	4.95
1986	4.9	5.15
1987	5.5	5.75

Based on these calendar year factors, we project a hospital market basket increase factor for FY 1986 (that is, October 1, 1985 to September 30, 1986) of 4.85 percent. Thus, the maximum update factor we could use in updating the FY 1986 standardized amounts, that is, the market basket plus one-quarter of one percentage point, would be 5.1 percent.

e. *Composite Policy Target Adjustment Factor*—(1) *General considerations.* In analyzing the prospective payment system,[1] we must consider the effects of the rates we set on outcomes such as quality of health care, access to care, the financial viability of the hospital industry, and the viability of the Medicare Part A Trust Fund. The annual prospective payment percentage increase factor should be set so that it provides incentives for desired outcomes under the prospective payment system. To achieve incentives for the desired outcome targets, we must ensure that the annual prospective payment update factor takes proper account of variables affecting the cost, efficiency, effectiveness and quality of production of hospital inpatient care. Our objective is to translate the intent of the statutory requirements for updating the prospective payment rates into a methodology for making adjustments to the current update factor that would enable us to express our consideration of these variables as policy targets.

To this end, we have identified three factors that correspond to matters that must be considered under sections 1886 (e)(2) and (e)(4) of the Act. For FY 1986, we are proposing to incorporate into the prospective payment update factor a composite "policy target adjustment factor" that takes account of productivity (efficiency), cost-effective technologies, and cost-ineffective practice patterns. Although, for the purposes of analysis and discussion, we have developed separate values for each of these three factors, we are proposing to combine them into a composite policy target adjustment factor, which would be considered in determining the FY 1986 prospective payment update factor.

As discussed in Appendix B, "quality," which is explicitly cited as one of the factors to be considered under section 1886(e)(2) of the Act, is an outcome factor that must be incorporated in the evaluation of the impacts of input/output factors. Thus, the effect on quality is a consideration in each of the three factors included in the composite policy target adjustment factor. We believe that to the extent that productivity and cost-effective use of technology are increased and cost-ineffectiveness is discouraged, quality of care should be enhanced. The proposed productivity and cost-effectiveness

[1] In determining how to implement the requirements of sections 1886 (e)(2) and (e)(4) of the Act, we have considered an analytic framework developed by the Division of National Cost Estimates of HCFA's Office of the Actuary. A technical explanation of this framework is included as Appendix B of this proposed rule.

offsets, discussed in greater detail below, reflect values that we believe can be and have been achieved with no adverse effects on quality. Productivity and cost-effectiveness not only need not compete with quality, but are often best pursued together with it. For example, practice patterns that minimize the potential for iatrogenic and nonsocomial diseases result in reduction of ineffective practices, eliminate unnecessary costs, and directly contribute to improved health status. Also, under the prospective payment system, a hospital that improves productivity and reduces its per case costs has an opportunity for an improved margin of revenue over costs. This margin may be shared many ways, depending on the choice of the hospital, including expending a portion of it in ways that would improve quality.

As discussed in section L of the impact analysis (Appendix A), there are varied and extensive efforts under way to monitor the effects of the prospective payment system on access to and quality of care. PROs, for example, are setting their own policy targets for reducing risk and improving quality of hospital care. The results of monitoring the quality of hospital services will be incorporated on an ongoing basis in our consideration of the appropriate levels at which to set each of the proposed adjustments included in the composite policy target adjustment factor. Thus, consistent with the analytic approach adopted by ProPAC, we do not believe it is necessary to incorporate a separate quality factor in the composite policy target adjustment.

The term "policy target adjustment factor" includes the effects of productivity, technology, and long-term cost effectiveness on the prospective payment rate per discharge. These factors are policy-determined variables reflecting targets, rather than historical experience, and they are difficult to quantify individually with existing data sources.

We do not think it is currently feasible to make independent and precise empirical estimates for the individual factors of productivity, technology, and ineffective practice patterns. Existing studies sometimes report to have a measure or an indicator for one of these three concepts, but such measures inadvertently have some unknown mixture of all three. Interaction relationships inherent among the three factors suggest that setting individual target values for the three components is suggestive, at best. Given the current data limitations, we feel it is more reasonable to look at all three factors, combined, than to strictly study each factor individually.

With this caveat in mind, we discuss the individual factors below, and propose values for each factor, to be combined into a composite policy target adjustment factor. The conservative values that we propose recognize the probability that available measures will not be able to absolutely separate them.

(2) *Productivity.* Productivity measures output per unit of input. The question, "Could the same output have been accomplished with fewer resources or with a different, less costly, mix of resources?" is answered by productivity measures. Hospitals often hire industrial engineers and management experts to increase productivity (efficiency) in hospital operations. Productivity improvements result in rises in output prices that are less than the rise in the price of inputs (holding profit margin and the nature of the outputs constant). In competitive industries, consumers benefit from the increases in productivity by paying lower prices. Likewise, under the prospective payment system, increases in productivity should be reflected by lower prices (that is, prospective payment rates) than would otherwise be the case.

Although studies of hospital productivity have been done, and some measures of productivity have been devised for specific applications, valid productivity indexes comparable to those for other industries are not currently available for the entire hospital industry. Various economy-wide productivity indexes developed by BLS indicate national productivity increases of approximately three percent annually for the last two years (1983 and 1984). However, long-term average rates of increase show substantial variation depending upon the time period covered, the industries included, and the productivity measure used (multi-factor productivity or labor productivity).

Given the years of retrospective, cost-based reimbursement, with attendant perverse incentives for productivity, we believe hospitals have the potential for substantial improvements in productivity. We expect that a two percent or more annual increase in productivity would not be unreasonable. We propose to incorporate a 1.0 percent productivity offset (reduction) in the FY 1986 policy target adjustment factor. We believe this is a conservative offset that would allow the hospitals to retain more than half of potential productivity gains. We believe sharing the benefits of the prospective payment system in this way provides desirable incentives.

(3) *Cost-effective technologies.* Certain technological changes, especially those related to the adoption of new products (with accompanying labor and nonlabor inputs), increase the operating cost of treating illness but also improve health status commensurately. We believe that the prospective payment rates should recognize new science and technology factors, which are cost-increasing, but also enhance health status. This should provide positive incentives for continued technological and scientific excellence.

The effects of new technologies and scientific advances on operating cost and health status are very complex and are difficult to isolate. Typically, a specific new technology increases cost in some uses and decreases costs in other uses. Concurrently, in some situations, health status is improved while in other situations, it may be unaffected or even worsened using the same technology. Separating out the relative importance of each of these effects for individual technologies and new technologies that are cost-increasing has proven to be elusive from a statistical point of view. Yet, it is important to allow for new technologies and scientific advances. Therefore, we propose to incorporate a 1.5 percent add-on in the FY 1986 policy target adjustment factor. We expect this add-on to promote, within bounds, the development and use of cost-effective new technologies. The 1.5 percent add-on allows significant growth over time in cost-increasing, health-enhancing new technologies and scientific advances, especially when one considers that all capital costs are currently paid on a cost basis and that this affords an additional allowance for accompanying labor and non-labor inputs.

(4) *Elimination of ineffective practice patterns.* Just as cost-effective new technologies and scientific advances are expected to increase a hospital's production of cost-effective outputs, and must be encouraged, existing practice patterns that are ineffective in the production of outputs should be discouraged. We believe the implementation of the prospective payment system has substantially increased the incentive for such changes of behavior, by affording hospitals a clear benefit from pursuing them, rather than the disincentive of potential decreases in cost reimbursement. As a prudent buyer, we want to get value for our money. We desire to share in the benefits accruing from more effective

and economical provision of care. Thus, one of our policy targets in setting the level of the Federal rates is to ensure that those rates afford an opportunity for buyer and provider of services to share the benefits resulting from the elimination of ineffective practice patterns.

Effectiveness compares the objective of improving health status with alternative uses of resources for achieving that objective to determine whether the right, or best available, care is being provided. A hospital can improve the effectiveness with which it delivers health care by:

- Eliminating practices that do not need to be done at all; and
- Ensuring that the only procedures and services furnished in the hospital are those that require a hospital level of care.

Two examples of changes in practice patterns that result in lower inpatient costs with no associated decrease in quality of care are: (1) The elimination of selected diagnostic tests, because their use does not improve health status; and (2) the reduction in length of stay with no decrease or change in health status outcome.

For example, average length of stay for hospitals in States subject to the prospective payment system (that is, excluding hospitals in Maryland, Massachusetts, New Jersey, and New York, which are paid under specially approved State systems) declined 11 percent in FY 1984. Hospitals experience a reduction in costs associated with reductions in length of stay. For purposes of determining additional payments for day outlier cases, we consider the marginal operating cost of an additional day of stay to be equal to 60 percent of the average per diem payment for the applicable DRG, excluding payment for pass-through costs that are not included in the prospective payment rate. (See § 412.82(c).) If we assume that this represents the ratio of marginal cost to average cost, we must conclude that our 11 percent reduction in length of stay would result in about a 6.6 percent reduction in cost per case. Of course, it can be argued that the marginal operating cost of an additional day of care may be significantly less than 60 percent of the average per diem cost. However, even if we assumed marginal costs to be only 40 percent of the average per diem cost, the FY 1984 reduction in length of stay would result in about a 4.4 percent reduction in cost per case. In addition to these considerations, we wish to point out that these probable reductions in costs do not reflect other changes in utilization of ancillary and other services, which have probably generated further reductions in the average cost per case under prospective payment.

We believe that the data on per case costs on which the FY 1984 and FY 1985 standardized amounts were based included a significant component of unnecessarily high costs reflecting ineffective practice patterns. There have since been, and there will presumably continue to be, significant changes in practice patterns, with corresponding reductions in cost per case. We believe that hospitals deserve to accrue benefits from these changes, but, nonetheless, we believe it is reasonable for us to share in them also. Therefore, we propose to incorporate a 2.0 percent offset (reduction) in the policy target adjustment factor for FY 1986.

(5) *ProPAC Recommendations on Discretionary Adjustments.* ProPAC coined the term "discretionary adjustment factor" to refer to the effect of taking into consideration productivity, technology, long-term cost-effectiveness, and changes in product on the payment per discharge under the prospective payment system. They recommended (Recommendation 10: Allowance for Productivity and Scientific and Technological Advancement Goals) that the FY 1986 prospective payment update factor include a discretionary adjustment factor of −1.0 percent. This adjustment would make allowance for "scientific and technological advancement, productivity improvement, and hospital product change."

In its discussion of the basis of this recommendation, ProPAC expressed many of the same issues and concerns as we have. It noted that the implicit judgments necessary in developing quantitative allowances for such variables have little precedent, and that the technical methods and data available upon which to base these judgments yield imprecise estimates. Nonetheless, its analysis and concerns are similar to ours, and it has recommended a −1.0 percent discretionary adjustment factor reflecting the following broad guidelines.

Adjustments	Percentage allowance
Scientific and technological advances	+1.5 to +2.0.
Hospital productivity	−1.5 to −2.0.
Changes in the hospital product	−1.0.
Net adjustment	−1.0.

Although these factors and values are not identical to ours, they are comparable, and suggest a very similar combination of offsets and add-ons and very similar magnitudes.

(6) *Proposed Composite Policy Target Adjustment.* For FY 1986 and thereafter, we propose to adjust the average standardized amounts by a percentage composite policy target adjustment factor, as authorized under section 1886(e)(4) of the Act. For FY 1986, this composite policy target adjustment factor is a composite of the offsets and add-ons for productivity, cost-effective technologies, and cost-ineffective practice patterns, as follows:

	Percent
Productivity	−1.0
Cost-effective technologies	+1.5
Cost-ineffective practice patterns	−2.0
Composite policy target adjustment factor	−1.5

(f) *Summary.* The combined effect of the forecasted increase in the hospital market basket, the proposed composite correction factor, and the proposed composite policy target adjustment factor would be a negative FY 1986 prospective payment update factor, as follows:

	Percent
Forecasted market basket increase	+4.85
Composite correction factor	−6.2
Composite policy target adjustment factor	−1.5
Total	−2.85

Such a negative update factor would result in a significant decrease in the standardized amounts for FY 1986, compared to those for FY 1985, and a corresponding reduction of anticipated revenue for hospitals subject to the prospective payment system. However, although we have substantial technical and legal justification for issuing FY 1986 standardized amounts that would be lower, on the average, than FY 1985 standardized amounts, we do not propose to do so. In addition, because we believe it is important to protect the prospectivity of this payment system, we do not plan to recoup any excessive payments resulting from the overstated FY 1985 standardized amounts.

The prospective payment system was intended, from its inception, to produce significant changes in the hospital industry. However, we do not want to cause these changes to take place too rapidly, because that may result in disruptions and unintended consequences that would adversely affect the industry, its patients, and us. Neither do we want to encourage changes that would compromise the access to quality inpatient hospital care historically enjoyed by Medicare

beneficiaries. Our objective is to set the FY 1986 update factor at a percentage level that takes into account amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality, in accordance with section 1886(e)(4) of the Act, and we believe that the payment rates should be set no lower than we have proposed in order to assure that this statutory standard is met.

We believe that, in an ideal course of events, the FY 1985 amounts would have been set at a lower level, and the FY 1986 amounts would be increased appropriately. However, the implementation of a new system seldom follows an ideal course. Moreover, we recognize that actually decreasing the standardized amounts would have adverse effects, not only relative to the expectations of affected hospitals, but on the development and acceptance of the prospective payment system. We also recognize that a large portion of the overstatement of the FY 1985 standardized amounts is not attributable to the actions or behavior of the hospital industry. The overstatement is to some extent the result of our desire, shared by Congress, to proceed cautiously with the implementation of the new system. Therefore, it would be inappropriate to set the FY 1986 Federal rates at a level that would appear to be punitive of the hospital industry.

Thus, we are proposing FY 1986 standardized amounts that are set at the same level as those for FY 1985. Because we restandardized the base year costs to reflect the proposed new survey-based wage index, the labor portions of the amounts set forth in Table 1, in section IV, below, are not identical to those of last year. However, the nonlabor portions of the proposed national and regional Federal rates, which are not affected by the wage index, are identical to those for FY 1985. For the reasons given above, we believe that the resulting payments would take into account the amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality.

4. Other Adjustments to the Average Standardized Amounts

a. *Part B Costs.* Section 1862(a)(14) of the Act prohibits payments for nonphysician services furnished to hospital inpatients unless the services are furnished either directly by the hospital, or by an entity under arrangements made by the hospital under which Medicare's payment to the hospital discharges the beneficiary's liability to pay for the services furnished. In order to adjust urban and rural regional and national standardized amounts per discharge so that they represent costs previously billed under Part B, we increased the amounts by a 0.13 percentage increase in both FY 1984 and FY 1985. We are proposing to make further adjustments for this factor in FY 1986 or in the future because the appropriate adjustment has been built into the FY 1985 base.

b. *FICA Taxes.* Section 1886(b)(6) of the Act requires that adjustments be made in the base period costs in recognition that certain hospitals were required to enter the Social Security system and begin paying FICA taxes as of January 1, 1984. In FY 1984 and FY 1985, we increased the urban and rural regional and national standardized amounts by 0.18 percent to account for additional costs of payroll taxes for hospitals entering the Social Security system. We are proposing to make no further adjustments for this factor in FY 1986 or in the future because the appropriate adjustment has been built into the FY 1985 base.

c. *Nonphysician anesthetist costs.* In the August 31, 1984, final rule, we implemented section 2312 of Pub. L. 98-369, which provided that hospital costs for the services of nonphysician anesthetists will be paid in full as a reasonable cost pass-through for cost reporting periods beginning before October 1, 1987.

We did not directly reduce the FY 1985 Federal rates to exclude the estimated costs of these services, because any required adjustment would be incorporated in the budget neutrality adjustment factors applied to the national and regional standardized amounts. (See 49 FR 34794; August 31, 1984). Since the FY 1986 standardized amounts are derived from an update of the FY 1985 amounts, which were adjusted for budget neutrality, the rates will automatically include the appropriate adjustment. We do not propose to make any further adjustments to the Federal rates for this factor for either FY 1986 or FY 1987.

d. *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)(2)(E) of the Act correspondingly requires that the standardized amounts be reduced by a proportion that is estimated to reflect outlier payments. Furthermore, section 1886(d)(5)(A)(IV) of the act further directs that outlier payments may not be less than five percent or more than six percent of total payments projected to be made based on the prospective payment rates in any year.

In the September 1, 1983 interim final rule (48 FR 39767), we estimated that outlier payments for FY 1984 would be 6.0 percent of total payments (including both standard prospective payment system payments and outlier payments). We made the maximum estimate permitted under the law in order to ensure that we would provide an adequate margin for outlier payments.

In the final rule published August 31, 1984 (49 FR 34728), we reduced the size of the reserve for outliers from 6.0 percent of total payments, which we had established for FY 1984, to 5.0 percent of total payments for FY 1985, while providing proportionately greater payment for typical cases and avoiding any great risk of general disadvantage to hospitals. We believe that it was in the greater interest of hospitals and the program to eliminate some of the reserve for outliers and correspondingly increase the amount in the standardized amounts, thereby providing hospitals with somewhat larger Federal rates for typical cases. We note that this has had the effect of increasing the predictability of total payments for hospitals in that less of the total is attributable to those cases that meet particular qualifications. Therefore, we propose to continue to set the size of the outlier reserve at approximately the five percent level for FY 1986. As indicated in the previous rules on prospective payment, we will pay for any outlier that meets the criteria in § 412.80, even if aggregate outlier payments result in more than five percent (as proposed) of total payments.

The FY 1985 standardized amounts were reduced by means of the budget neutrality methodology to the level necessary to take into account outlier payments of five percent of total payments based on the Federal rates. (See 49 FR 34795.) We do not propose to make any further adjustments to the standardized amounts for FY 1986 or future years, unless we later propose to increase the size of the outlier reserve.

We are proposing to revise the day outlier and cost outlier thresholds, using the most recent length of stay and charge data available, to ensure that total estimated outlier payments for FY 1986 would be 5.0 percent of total payments. We are proposing that a discharge in FY 1986 will be considered an outlier if the number of days in the stay exceeds the mean length of stay for discharges within the DRG by the lesser of 17 days or 1.94 standard deviations. (For FY 1985 we set the day outlier threshold at the lesser of 22 days or 1.94 standard deviations.) We refer the

reader to Table 5 in this addendum for the proposed DRG day outlier thresholds.

For FY 1986, we are also proposing that a discharge that does not qualify as a day outlier will be considered a high cost outlier if the cost of covered services exceeds the greater of 2.0 times the Federal rate for the DRG, or $13,500. (For FY 1985, we set the cost outlier thresholds at the greater of 2.0 times the Federal rate for the DRG, or $13,000.)

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 standardization amounts that will be made by the intermediaries in determining the prospective payment rates as described in section D. below. For discussion purposes, it is necessary to present the adjusted standardized amounts divided into labor and nonlabor portions. Table 1, as we propose to revise it in this addendum, contains the actual labor-related and nonlabor-related shares that will be used to calculate the prospective payment rates.

1. Adjustment for Area Wage Levels

Section 1886(d)(H) of the Act requires that an adjustment be made to the labor-related portion of the national and regional 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 amount by the appropriate wage index for the area in which the hospital is located. In section III. of the preamble to this proposed rule, we discuss a new wage index based on our own wage survey data. This index is set forth in Tables 4a and 4b of section IV. of this addendum.

2. Adjustment for Cost-of-Living in Alaska and Hawaii

Section 1886(d)(5)(C)(iv) of the Act authorizes an adjustment to take into account the unique circumstances of hospitals in Alaska and Hawaii. Higher labor-related costs for these two States were included in the adjustment for area wages above. For FY 1986, the adjustment necessary for nonlabor-related costs for hospitals in Alaska and Hawaii would 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.—COST OF LIVING ADJUSTMENT FACTORS, ALASKA AND HAWAII HOSPITALS

Alaska—All areas	1.25
Hawaii:	
Oahu	1.20
Kauai	1.175
Maui	1.20
Molokai	1.20
Lanai	1.20
Hawaii	1.10

Note.—The above factors are based on data obtained from the U.S. Office of Personnel Management, published in their FPM-591 letter series.

C. DRG Weighting Factors

As discussed in section II of the preamble to this proposed rule, we have developed a classified system for all hospital discharges, sorting them into Diagnosis-Related Groups (DRGs), and have developed weighting factors for each DRG that are intended to reflect the relative resource consumption associated with each DRG.

Table 5 of section IV of this addendum contains the weighting factors that we propose to use for discharges occurring in FY 1986. These factors have been recalibrated as explained in section II. of the preamble, and reflect the changes in the GROUPER program summarized in Table 6.

To identify certain DRGs more clearly, the titles of the following DRGs would be revised as indicated below. These changes are in addition to those discussed in section II.B. of the preamble.

DRG	Current title	Proposed title
15	Transient Ischemic Attack.	Transient Ischemic Attack and Precerebral Occlusions.
61	Myringotomy Age>17	Myringotomy with Tube Insertion Age>17
62	Myringotomy Age 0-17	Myringotomy with Tube Insertion Age 0-17
76	O.R. Proc on the Resp System Except Major Chest With C.C.	Other Respiratory System O.R. Procedures with C.C.
77	O.R. Proc on the Resp System Except Major Chest W/O C.C.	Other Respiratory System O.R. Procedures W/O C.C.
157	Anal Procedures Age>69 and/or C.C.	Anal and Stomal Procedures Age>69 and/or C.C.
158	Anal Procedures Age<70 W/O C.C.	Anal and Stomal Procedures Age<70 W/O C.C.
209	Major Joint Procedures.	Major Joint and Limb Reattachment Procedures.
263	Skin Grafts for Skin Ulcer or Cellulitis Age>69 and/or C.C.	Skin Grafts and/or Debridement for Skin Ulcer or Cellulitis Age>69 and/or C.C.
264	Skin Grafts for Skin Ulcer or Cellulitis Age<70 W/O C.C.	Skin Grafts and/or Debridement for Skin Ulcer or Cellulitis Age<70 W/O C.C.
265	Skin Grafts Except for Skin Ulcer or Cellulitis with C.C.	Skin Grafts and/or Debridement Except for Skin Ulcer or Cellulitis with C.C.
266	Skin Grafts Except for Skin Ulcer or Cellulitis with W/O C.C.	Skin Grafts and/or Debridement Except for Skin Ulcer or Cellulitis W/O C.C.
285	Amputations for Endocrine, Nutritional + Metabolic Disorders.	Amputations of Lower Limb for Endocrine, Nutritional + Metabolic Disorders.
359	Tubal Interruption for Non-malignancy.	Incisional Tubal Interruption for Non-malignancy
376	Postpartum Diagnoses W/O O.R. Procedure.	Postpartum and Postabortion Diagnoses W/O O.R. Procedure.
377	Postpartum Diagnoses with O.R. Procedure.	Postpartum and Postabortion Diagnoses with O.R. Procedure
381	Abortion with D+C.	Abortion with D+C or Aspiration Curettage.
386	Extreme Immaturity, Neonate.	Extreme Immaturity or Respiratory Distress Syndrome, Neonate.
401	Lymphoma or Leukemia with minor O.R. Proc Age>69 and/or C.C.	Lymphoma or Leukemia with other O.R. Proc Age>69 and/or C.C.
402	Lymphoma or Leukemia with minor O.R. Proc Age>70 W/O C.C.	Lymphoma or Leukemia with Other O.R. Procedure Age>70 W/O C.C.
449	Toxic Effects of Drugs Age>69 and/or C.C.	Poisoning and Toxic Effects of Drugs Age>69 and/or C.C.
450	Toxic Effects of Drugs Age 18-69.	Poisoning and Toxic Effects of Drugs Age 18-69 W/O C.C.
451	Toxic Effects of Drugs Age 0-17	Poisoning and Toxic Effects of Drugs Age 0-17

D. Calculation of Prospective Payment Rates for FY 1986

FY 1986 represents the third year of the three-year transition period.

General Formula for Calculation of Prospective Payment Rates for Cost Reporting Periods Beginning on or after October 1, 1985 and Before October 1, 1986

Prospective Payment Rate = Hospital-Specific Portion + Federal Portion.

1. Hospital-Specific Portion

The hospital-specific portion of the prospective payment rate is based on a hospital's historical cost experience. For the first cost reporting period under prospective payment, a hospital-specific rate was calculated for each hospital, derived generally from the following formula:

$$\frac{\text{Base year costs per discharge}}{\text{1981 case-mix index}} \times \text{updating factor} = \text{Hospital-Specific Rate}$$

For the first prospective payment cost reporting period, the hospital-specific portion equaled 75 percent of the hospital-specific rate. For each subsequent transition period cost reporting period, the hospital-specific portion is derived as follows:

Previous Period's Hospital-Specific Rate × Updating Factor × Blending Percentage × DRG Weight

The blending percentage for cost reporting periods beginning in FY 1986 is 25 percent. For a more detailed discussion of the hospital-specific

portion, we refer the reader to the September 1, 1983 interim final rule (48 FR 39772).

a. *Updating the Hospital-Specific Rates for FY 1986 Cost Reporting Periods.* We are proposing to carry forward the hospital-specific rates for FY 1985 cost reporting periods without increasing them for FY 1986. For reasons discussed below, the FY 1985 hospital-specific rates were set too high, just as the FY 1985 Federal rates were. If we were to propose to correct the rates prospectively for the full amount of the overstatement, it would result in a reduction of the hospital-specific rates. For the same reasons that we have decided not to reduce the FY 1986 Federal rates, we have decided that it is preferable to carry the rates forward unchanged for the last year of the transition period.

For cost reporting periods beginning in FY 1985, we determined each hospital's hospital-specific rate (before applying the 50 percent blending percentage for the second year of the prospective payment transition period) by applying the applicable compounded target rate percentage, as adjusted for budget neutrality, to the hospital's previous year's hospital-specific rate. The target rate percentages we used incorporated the same overstated market basket percentages as were used in determining the FY 1985 standardized amounts (Federal rates). In addition, each hospital's base-year costs were adjusted to remove the effect of the hospital's 1981 case-mix index, so that the hospital-specific portion, as well as the Federal portion, could be adjusted by a DRG weight in determining payment. As a result, the unanticipated rate of increase in case mix since the implementation of the prospective payment system, discussed above, has also resulted in overstated hospital-specific rates. Note that these are the same factors for which corrections are being applied in determining the proposed Federal rates, as discussed in section II.A.3., above.

The requirement of budget neutrality (section 1886(e)(1) of the Act), which is discussed in relation to the Federal rates in section II.A.3, above, also governed the level of the target rate percentage increase for hospital-specific rates for cost reporting periods beginning in FY 1985. The intent of Congress was that the hospital-specific rates for FY 1986 be updated from *budget neutral* rates for the previous period. However, the target rate percentages for cost reporting periods beginning in FY 1985 were too high to achieve actual budget neutrality. Therefore, we believe it could be argued that we are required to adjust those hospital-specific rates downward before updating them for cost reporting periods beginning in FY 1986.

The reductions to the hospital-specific rates that would be necessary to correct the FY 1985 overstatement fully are as follows:

	Percent
Case-mix	−4.9
Market basket	−1.3
Combined	−6.2

b. *Calculation of Hospital-Specific Portion.* For hospital cost reporting periods beginning in FY 1986, the hospital-specific portion of a hospital's payment for a given discharge would be calculated by:

Step 1—Multiplying the previous cost reporting period's hospital-specific rate by 25 percent, and

Step 2—Multiplying the amount resulting from Step 1 by the specific DRG weighting factor applicable to the discharge. The result is the hospital-specific portion of the FY 1986 prospective payment for a given discharge.

c. *New Providers.* Hospitals that have not completed a 12-month cost reporting period under Medicare (either under current or previous ownership) prior to September 30, 1983 and hospitals that meet the criteria in § 412.74 are considered new providers for purposes of the prospective payment system. Their prospective payment rates are computed solely on the Federal rates. Thus, new providers are paid a blend of 50 percent of the appropriate Federal regional rate and 50 percent of the Federal national rate for discharges occurring on or after October 1, 1985 and before October 1, 1985 and before October 1, 1986.

2. Federal Portion

For cost reporting period beginning on or after October 1, 1985 and before October 1, 1986, the Federal portion of the hospital's total prospective payment will be 75 percent of the hospital's Federal rate. Beginning with discharges occurring on or after October 1, 1985, the Federal rate is comprised of a blend of the appropriate Federal regional rate (50 percent) and the Federal national rate (50 percent).

III. Proposed Target Rate Percentages for Hospitals and Hospital Units Excluded From the Prospective Payment System

A. Background

The inpatient operating costs of hospitals and hospital units excluded from the prospective payment system are subject to rate-of-increase limits established by section 1886(b) of the Act and implemented in § 405.463 of the regulations. Under these 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. 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 differences between the inpatient operating cost per discharge and the target amount, or (2) five 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, prorated based on calendar year target rate percentages. For cost reporting periods beginning in FY 1983 and FY 1984, the applicable target rate percentage was the estimated hospital market basket increase factor plus one percentage point. For cost reporting periods beginning in FY 1985, the applicable target rate percentage is the estimated hospital market basket increase factor plus one-quarter of one percentage point, as prescribed by section 1886(b)(3)(B) of the Act. For cost reporting periods beginning in FY 1986 and thereafter (that is, on or after October 1, 1985), the target rate percentage will be adjusted by an update factor determined by the Secretary under section 1886(e)(4) of the Act, considering the recommendations of ProPAC under section 1886(e)(2) of the Act.

B. Proposed Target Amounts for Cost Reporting Periods Beginning in FY 1986

For cost reporting periods beginning in FY 1986, we are proposing to carry forward each hospital's previous year's target amount without increase. This is consistent with the update we are proposing for both Federal rates and hospital-specific rates under the prospective payment system and would comply with the provisions of sections 1886(b)(3)(B) and 1886(e)(4) of the Act, which contemplate a single "percentage change" for all hospitals. In discussing the percentage change, these sections of the Act do not distinguish between hospitals subject to or excluded from the prospective payment system. Thus, we

are required to apply the same update factor to both groups of hospitals and to units excluded from the prospective payment system.

In addition, even if we were not required by law to apply the same update factor to hospitals both included in and excluded from prospective payment, we believe it would be appropriate to do so. Although certain of the adjustments and factors considered in determining the appropriate update under prospective payment may not apply to excluded hospitals and units, there are other considerations that we believe would justify a zero percentage increase for FY 1986.

Hospitals under the prospective payment system have strong incentives for economy and efficiency and have demonstrated their ability to respond to these incentives. However, since hospitals and units excluded from the prospective payment system are still being reimbursed on a reasonable cost basis, their incentives to increase productivity and cost-effectiveness are not as strong. We believe it is desirable to establish stronger incentives for excluded hospitals and units to reduce costs.

This is particularly important in view of the plans we are pursuing to bring these hospitals and units under the prospective payment system as soon as possible. Because of these plans, it would be appropriate at this time to begin providing excluded hospitals and units with incentives comparable to those experienced by hospitals under the prospective payment system. We expect many excluded hospitals and units will be able to achieve greater efficiency and effectiveness in the delivery of needed services as a response to these limits.

Since the rate of increase ceiling is a limit and not a payment rate, excluded hospitals and units that operate efficiently and maintain per case costs below their target amounts would continue to have a margin for increasing costs. In addition, under the provisions of section 1886(b)(4)(A) of the Act and § 405.463(g), a hospital or unit subject to the rate of increase limit may qualify for exceptions to that limit if it demonstrates that a portion of their costs above the limit is attributable to extraordinary circumstances or abrupt changes in patient mix. The availability of such exceptions affords protection for those hospitals that may exceed their target amount ceiling for reasons other than inefficiency.

C. ProPAC Recommendations

ProPAC made two recommendations concerning excluded hospitals and units. In Recommendation 3, it suggested that separate market basket weights should be used for the group of psychiatric, rehabilitation, and long-term care hospitals and related distinct-part units that are exempt from the prospective payment system, but subject to the TEFRA rate of increase limitation. However, it noted tht separate market basket weights need not be developed for children's hospitals.

We have studied this recommendation, and agree that it is possible to develop such a separate market basket for excluded hospitals and units. However, studies to date show there is little difference in market baskets. In addition, as noted above, we have every intention of incorporating excluded hospitals and units in the prospective payment system in the futue. Therefore, we believe there is not sufficient justification for developing a separate market basket for excluded hospitals and units. In addition, since the law contemplates the same percentage update for hospitals both included in and excluded from the prospective payment system, we do not believe it is appropriate to develop separate market baskets.

This requirement in the law also applies to ProPAC's twelfth recommendation, that hospitals and units excluded from the prospective payment system have the same adjustments applied to the market basket increase factor as would be applied to the prospective payment rate update factor to take into account productivity and technological and scientific advancement.

IV. Tables

This section contains the tables referred to throughout the preamble to this proposed rule and in this addendum.

TABLE 1.—ADJUSTED STANDARDIZED AMOUNTS, LABOR/NONLABOR

Region	Urban		Rural	
	Labor related	Nonlabor related	Labor related	Nonlabor related
1. New England (CT, ME, MA, NH, RI, VT)	2,358.59	668.56	2,133.78	507.22
2. Middle Atlantic (PA, NJ, NY)	2,216.72	660.71	2,168.51	514.40
3. South Atlantic (DE, DC, FL, GA, MD, NC, SC, VA, WV)	2,357.90	612.25	1,986.47	427.43
4. East North Central (IL, IN, MI, OH, WI)	2,437.09	712.68	2,017.00	478.79
5. East South Central (AL, KY, MS, TN)	2,234.29	544.93	1,976.60	399.94
6. West North Central (IA, KS, MN, MO, NB, ND, SD)	2,265.11	634.00	1,834.32	410.91
7. West South Central (AR, LA, OK, TX)	2,308.17	599.67	1,852.89	398.47
8. Mountain (AZ, CO, ID, MT, NV, NM, UT, WY)	2,225.80	636.52	1,826.36	447.21
9. Pacific (AK, CA, HI, OR, WA)	2,209.24	745.34	1,829.99	521.49
10. National	2,310.05	664.44	1,927.32	438.18

TABLE 4a.—WAGE INDEX FOR URBAN AREAS

Urban area (constituent counties or county equivalents)	Wage index
Abilene, TX (Taylor, TX)	.8929
Akron, OH (Portage, OH; Summit, OH)	1.0996
Albany, GA (Dougherty, GA; Lee, GA)	.8120
Albany-Schenectady-Troy, NY (Albany, NY; Greene, NY; Montgomery, NY; Rensselaer, NY; Saratoga, NY; Schenectady, NY)	.9278
Albuquerque, NM (Bernalillo, NM)	1.0996
Alexandria, LA (Rapides, LA)	.9103
Allentown-Bethlehem, PA-NJ (Warren, NJ; Carbon, PA; Lehigh, PA; Northampton, PA)	1.0374
Altoona, PA (Blair, PA)	.9950
Amarillo, TX (Potter, TX; Randall, TX)	.9514
Anaheim-Santa Ana, CA (Orange, CA)	1.2516
Anchorage, AK (Anchorage, AK)	1.5729
Anderson, IN (Madison, IN)	.9178
Anderson, SC (Anderson, SC)	.8306
Ann Arbor, MI (Washtenaw, MI)	1.2503
Anniston, AL (Calhoun, AL)	.8456
Appleton-Oshkosh-Neenah, WI (Calumet, WI; Outagamie, WI; Winnebago, WI)	1.0660
Asheville, NC (Buncombe, NC)	.8780
Athens, GA (Clarke, GA; Jackson, GA; Madison, GA; Oconee, GA)	.8120
Atlanta, GA (Barrow, GA; Butts, GA; Cherokee, GA; Clayton, GA; Cobb, GA; Coweta, GA; 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)	.9589
Atlantic City, NJ (Atlantic, NJ; Cape May, NJ)	1.0486
Augusta, GA-SC (Columbia, GA; McDuffie, GA; Richmond, GA; Aiken, SC)	.9527
Aurora-Elgin, IL (Kane, IL; Kendall, IL)	1.0934
Austin, TX (Hays, TX; Travis, TX; Williamson, TX)	1.1096
Bakersfield, CA (Kern, CA)	1.1968

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

Urban area (constituent counties or county equivalents)	Wage index
Baltimore, MD (Anne Arundel, MD; Baltimore, MD; Baltimore City, MD; Carroll, MD; Harford, MD; Howard, MD; Queen Annes, MD)	1.1059
Bangor, ME (Penobscot, ME)	.9128
Baton Rouge, LA (Ascension, LA; East Baton Rouge, LA; Livingston, LA; West Baton Rouge, LA)	.9751
Battle Creek, MI (Calhoun, MI)	1.0224
Beaumont-Port Arthur, TX (Hardin, TX; Jefferson, TX; Orange, TX)	1.0000
Beaver County, PA (Beaver, PA)	1.0834
Bellingham, WA (Whatcom, WA)	1.1382
Benton Harbor, MI (Berrien, MI)	.8842
Bergen-Passaic, NJ (Bergen, NJ; Passaic, NJ)	1.0735
Billings, MT (Yellowstone, MT)	1.0149
Biloxi-Gulfport, MS (Hancock, MS; Harrison, MS)	.8418
Binghamton, NY (Broome, NY; Tioga, NY)	.9489
Birmingham, AL (Blount, AL; Jefferson, AL; Saint Clair, AL; Shelby, AL; Walker, AL)	.9589
Bismarck, ND (Burleigh, ND; Morton, ND)	.9626
Bloomington, IN (Monroe, IN)	.9626
Bloomington-Normal, IL (McLean, IL)	.9763
Boise City, ID (Ada, ID)	1.0498
Boston-Lawrence-Salem-Lowell-Brockton, MA (Essex, MA; Middlesex, MA; Norfolk, MA; Plymouth, MA; Suffolk, MA)	1.1482
Boulder-Longmont, CO (Boulder, CO)	1.1233
Bradenton, FL (Manatee, FL)	.9128
Brazoria, TX (Brazoria, TX)	.8680
Bremerton, WA (Kitsap, WA)	.9738
Bridgeport-Stamford-Norwalk-Danbury, CT (Fairfield, CT)	1.1756
Brownsville-Harlingen, TX (Cameron, TX)	.8904

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

Urban area (constituent counties or county equivalents)	Wage index
Bryan-College Station, TX (Brazos, TX)	.9489
Buffalo, NY (Erie, NY)	1.0473
Burlington, NC (Alamance, NC)	.7858
Burlington, VT (Chittenden, VT; Grand Isle, VT)	1.0050
Canton, OH (Carroll, OH; Stark, OH)	1.0000
Casper, WY (Natrona, WY)	1.0971
Cedar Rapids, IA (Linn, IA)	1.0100
Champaign-Urbana-Rantoul, IL (Champaign, IL)	.9888
Charleston, SC (Berkeley, SC; Charleston, SC; Dorchester, SC)	.8542
Charleston, WV (Kanawha, WV; Putnam, WV)	1.0399
Charlotte-Gastonia-Rock Hill, NC–SC (Cabarrus, NC; Gaston, NC; Lincoln, NC; Mecklenburg, NC; Rowan, NC; Union, NC; York, SC)	.8917
Charlottesville, VA (Albermarle, VA; Charlottesville City, VA; Fluvanna, VA; Greene, VA)	.9278
Chattanooga, TN-GA (Catoosa, GA; Dade, GA; Walker, GA; Hamilton, TN; Marion, TN; Sequatchie, TN)	1.0025
Chicago, IL (Cook, IL; Du Page, IL; McHenry, IL)	1.2291
Chico, CA (Butte, CA)	1.2366
Cincinnati, OH–KY–IN (Dearborn, IN; Boone, KY; Campbell, KY; Kenton, KY; Clermont, OH; Hamilton, OH; Warren, OH)	1.0959
Clarksville-Hopkinsville, TN-KY (Christian, KY; Montgomery, TN)	.8120
Cleveland, OH (Cuyahoga, OH; Geauga, OH; Lake, OH; Medina, OH)	1.1469
Colorado Springs, CO (El Paso, CO)	1.0361
Columbia, MO (Boone, MO)	1.0934
Columbia, SC (Lexington, SC; Richland, SC)	.9091
Columbus, GA-AL (Russell, AL; Chattanoochee, GA; Muscogee, GA)	.7870
Columbus, OH (Delaware, OH; Fairfield, OH; Franklin, OH; Licking, OH; Madison, OH; Pickaway, OH; Union, OH)	.9614
Corpus Christi, TX (Nueces, TX; San Patricio, TX)	.9826
Cumberland, MD-WV (Allegeny, MD; Mineral, WV)	.8929
Dallas, TX (Collin, TX; Dallas, TX; Denton, TX; Ellis, TX; Kaufman, TX; Rockwall, TX)	1.0672
Danville, VA (Danville, City, VA; Pittsylvania, VA)	.8020
Davenport-Rock Island-Moline, IA–IL (Scott, IA; Henry, IL; Rock Island, IL)	1.0573
Dayton-Springfield, OH (Clark, OH; Greene, OH; Miami, OH; Montgomery, OH)	1.0859
Daytona Beach, FL (Volusia, FL)	.9066
Decatur, IL (Macon, IL)	.9514
Denver, CO (Adams, CO; Arapahoe, CO; Denver, CO; Douglas, CO; Jefferson, CO)	1.2765
Des Moines, IA (Dallas, IA; Polk, IA; Warren, IA)	1.0473
Detroit, MI (Lapeer, MI; Livingston, MI; Macomb, MI; Monroe, MI; Oakland, MI; Saint Clair, MI; Wayne, MI)	1.1631
Dothan, AL (Dale, AL; Houston, AL)	.8394
Dubuque, IA (Dubuque, IA)	1.0511
Duluth, MN-WI (St. Louis, MN; Douglas, WI)	.9851
Eau Claire, WI (Chippewa, WI; Eau Claire, WI)	.9427
El Paso, TX (El Paso, TX)	.9365
Elkhart-Goshen, IN (Elkhart, IN)	.9577
Elmira, NY (Chemung, NY)	.9664
Enid, OK (Garfield, OK)	.9552
Erie, PA (Erie PA)	.9913
Eugene-Springfield, OR (Lane, OR)	1.1071
Evansville, IN-KY (Posey, IN; Vanderburgh, IN; Warrick, IN; Henderson, KY)	1.0137
Fargo-Moorhead, ND-MN (Clay, MN; Cass, ND)	1.0560
Fayetteville, NC (Cumberland, NC)	.8269
Fayetteville-Springdale, AR (Washington, AR)	.8020
Flint, MI (Genesee, MI)	1.2005
Florence, AL (Colbert, AL; Lauderdale, AL)	.7833
Florence, SC (Florence, SC)	.7621
Fort Collins-Loveland, CO (Larimor, CO)	1.0760
Fort Lauderdale-Hollywood-Pompano Beach, FL (Broward, FL)	1.1158
Fort Myers-Cape Coral, FL (Lee, FL)	.9465
Fort Pierce, FL (Martin, FL; St. Lucie, FL)	.9178
Fort Smith, AR-OK (Crawford, AR; Sebastian, AR; Sequoyah, OK)	.9166
Fort Walton Beach, FL (Okaloosa, FL)	.8680
Fort Wayne, IN (Allen, IN; De Kalb, IN; Whitley, IN)	.9489
Fort Worth-Arlington, TX (Johnson, TX; Parker, TX; Tarrant, TX)	.9925
Fresno, CA (Fresno, CA)	1.1395
Gadsden, AL (Etowah, AL)	.8705
Gainesville, FL (Alachua, FL; Bradford, FL)	.9564
Galveston-Texas City, TX (Galveston TX)	1.1320
Gary-Hammond, IN (Lake, IN; Porter, IN)	1.0897
Glens Falls, NY (Warren, NY; Washington, NY)	.9527
Grand Forks, ND (Grand Forks, ND)	.9788

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

Urban area (constituent counties or county equivalents)	Wage index
Grand Rapids, MI (Kent, MI; Ottawa, MI)	1.0585
Great Falls, MT (Cascade, MT)	1.0635
Greeley, CO (Weld, CO)	1.0672
Green Bay, WI (Brown, WI)	1.0249
Greensboro-Winston-Salem-High Point, NC (Davidson, NC; Davie, NC; Forsyth, NC; Guilford, NC; Randolph, NC; Stokes, NC; Yadkin, NC)	.9315
Greenville-Spartanburg, SC (Greenville, SC; Pickens, SC; Spartanburg, SC)	.9054
Hagerstown, MD (Washington, MD)	.9514
Hamilton-Middletown, OH (Butler, OH)	1.0137
Harrisburg-Lebanon-Carlisle, PA (Cumberland, PA; Dauphin, PA; Lebanon, PA; Perry, PA)	.9786
Hartford-New Middletown-Britain-Bristol, CT (Hartford, CT; Litchfield, CT; Middlesex, CT; Tolland, - CT)	1.1370
Hickory, NC (Alexander, NC; Burke, NC; Catawba, NC)	.8917
Honolulu, HI (Honolulu, HI)	1.1930
Houma-Thibodaux, LA (Lafourche, LA; Terrebonne, LA)	.9153
Houston, TX (Fort Bend, TX; Harris, TX; Liberty, TX; Montgomery, TX; Waller, TX)	1.0585
Huntington-Ashland, WV-KY-OH (Boyd, KY; Carter, KY; Greenup, KY; Lawrence, OH; Cabell, WV; Wayne, WV)	.9440
Huntsville, AL (Madison, AL)	.8593
Indianapolis, IN (Boone, IN; Hamilton, IN; Hancock, IN; Hendricks, IN; Johnson, IN; Marion, IN; Morgan, IN; Shelby, IN)	1.0511
Iowa City, IA (Johnson, IA)	1.2976
Jackson, MI (Jackson, MI)	1.0125
Jackson, MS (Hinds, MS; Madison, MS; Rankin, MS)	.9278
Jacksonville, FL (Clay, FL; Duval, FL; Nassau, FL; St. Johns, FL)	.9402
Jacksonville, NC (Onslow, NC)	.7906
Janesville-Beloit, WI (Rock, WI)	.9352
Jersey City, NJ (Hudson, NJ)	1.0523
Johnson City-Kingsport-Bristol, TN-VA (Carter, TN; Hawkins, TN; Sullivan, TN; Unicoi, TN; Washington, TN; Bristol City, VA; Scott, VA; Washington, VA)	.8555
Johnstown, PA (Cambria, PA; Somerset, PA)	.9452
Joliet, IL (Grundy, IL; Will, IL)	1.1171
Joplin, MO. (Jasper, MO; Newton, MO)	9128
Kalamazoo, MI. (Kalamazoo, MI)	1.2242
Kankakee, IL. (Kankakee, IL)	.9440
Kansas City, KS–MO. (Johnson, KS; Leavenworth, KS; Miami, KS; Wyandotte, KS; Cass, MO; Clay, MO; Jackson, MO; Lafayette, MO; Platte, MO; Ray, MO)	1.0573
Kenosha, WI. (Kenosha, WI)	1.0785
Killeen-Temple, TX. (Bell, TX; Coryell, TX)	.8780
Knoxville, TN. (Anderson, TN; Blount, TN; Grainger, TN; Jefferson, TN; Knox, TN; Sevier, TN; Union, TN)	.8929
Kokomo, IN. (Howard, IN; Tipton, IN)	.9768
LaCrosse, WI. (LaCrosse, WI)	1.0087
Lafayette, LA. (Lafayette, LA; St. Martin, LA)	1.0037
Lafayette, IN. (Tippecanoe, IN)	.9091
Lake Charles, LA. (Calcasieu, LA)	.9963
Lake County, IL. (Lake, IL)	1.1544
Lakeland-Winter Haven, FL. (Polk, FL)	.8780
Lancaster, PA (Lancaster, PA)	1.0311
Lansing-East Lansing, MI. (Clinton, MI; Eaton, MI; Ingham, MI)	1.0685
Laredo, TX. (Webb, TX)	.8095
Las Cruces, NM. (Dona Ana, NM)	.8892
Las Vegas, NV. (Clark, NV)	1.1171
Lawrence, KS. (Douglas, KS)	1.0100
Lawton, OK. (Comanche, OK)	.9390
Lewiston-Auburn, ME. (Androscoggin ME)	.9352
Lexington-Fayette, KY. (Bourbon, KY; Clark, KY; Fayette, KY; Jessamine, KY; Scott, KY; Woodford, KY)	.9801
Lima, OH. (Allen, OH; Auglaize, OH)	.9798
Lincoln, NE. (Lancaster, NE)	.9639
Little Rock-North Little Rock, AR. (Faulkner, AR; Lonoke, AR; Pulaski, AR; Saline, AR)	1.1046
Longview-Marshall, TX. (Gregg, TX; Harrison TX)	.8344
Lorain-Elyria, OH. (Lorain, OH)	1.0199
Los Angeles-Long Beach, CA. (Los Angeles CA)	1.3188
Louisville, KY–IN. (Clark, IN; Floyd, IN; Harrison, IN; Bullitt, KY; Jefferson, KY; Oldham, KY; Shelby, KY)	1.0000
Lubbock, TX (Lubbock, TX)	1.0050
Lynchburg, VA (Amherst, VA; Campbell, VA; Lynchburg City, VA)	.8194

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

Urban area (constituent counties or county equivalents)	Wage index
Macon-Warner Robins, GA (Bibb, GA; Houston, GA; Jones, GA; Peach, GA)	.9253
Madison, WI (Dane, WI)	1.0622
Manchester-Nashua, NH (Hillsboro, NH; Merrimack, NH)	.9502
Mansfield, OH (Richland, OH)	.9838
McAllen-Edinburg-Mission, TX (Hidalgo, TX)	.8045
Medford, OR (Jackson, OR)	1.0274
Melbourne-Titusville, FL (Brevard, FL)	.9309
Memphis, TN–AR–MS (Crittenden, AR; De Soto, MS; Shelby, TN; Tipton, TN)	1.0573
Miami-Hialeah, FL (Dade, FL)	1.0623
Middlesex-Somerset-Hunterdon, NJ (Hunterdon, NJ; Middlesex, NJ; Somerset, NJ)	1.0598
Midland, TX (Midland, TX)	1.1220
Milwaukee, WI (Milwaukee, WI; Ozaukee, WI; Washington, WI; Waukesha, WI)	1.1320
Minneapolis-St. Paul, MN-WI (Anoka, MN; Carver, MN; Chisago, MN; Dakota, MN; Hennepin, MN; Isanti, MN; Ramsey, MN; Scott, MN; Washington, MN; Wright, MN; St. Croix, WI)	1.1681
Mobile, AL (Baldwin, AL; Mobile, AL)	.8654
Modesto, CA (Stanislaus, CA)	1.2005
Monmouth-Ocean, NJ (Monmouth, NJ; Ocean, NJ)	.9851
Monroe, LA (Ouachita, LA)	.9265
Montgomery, AL (Autauga, AL; Elmore, AL; Montgomery, AL)	.8804
Muncie, IN (Delaware, IN)	.9698
Muskegon, MI (Muskegon, MI)	.9838
Naples, FL (Collier, FL)	.9714
Nashville, TN (Cheatham, TN; Davidson, TN; Dickson, TN; Robertson, TN; Rutherford, TN; Sumner, TN; Williamson, TN; Wilson, TN)	.9340
Nassau-Suffolk, NY (Nasssau, NY; Suffolk, NY)	1.3275
New Beford-Fall River-Attleboro, MA (Bristol, MA)	.9714
New Haven-West Haven-Waterbury-Meriden, CT (New Haven, CT)	1.1183
New London-Norwich, CT (New London, CT)	1.1021
New Orleans, LA (Jefferson, LA; Orleans, LA; St. Bernard, LA; St. Charles, LA; St. John The Baptist, LA; St. Tammany, LA)	.9265
New York, NY (Bronx, NY; Kings, NY; New York City, NY; Putnam, NY; Queens, NY; Richmond, NY; Rockland, NY; Westchester, NY)	1.3711
Newark, NJ (Essex, NJ; Morris, NJ; Sussex, NJ; Union, NJ)	1.1320
Niagara Falls, NY (Niagara, NY)	.8892
Norfolk-Virginia Beach-Newport News, VA (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)	.9614
Oakland, CA (Alameda, CA; Contra Costa, CA)	1.4844
Ocala, FL (Marion, FL)	.8667
Odessa, TX (Ector, TX)	.9539
Oklahoma City, OK (Canadian, OK; Cleveland, OK; Logan, OK; McClain, OK; Oklahoma, OK; Pottawatomie, OK)	1.0847
Olympia, WA (Thurston, WA)	1.0697
Omaha, NE-IA (Pottawattamie, IA; Douglas, NE; Sarpy, NE; Washington, NE)	1.0423
Orange County, NY (Orange, NY)	.9226
Orlando, FL (Orange, FL; Osceola, FL; Seminole, FL)	1.0112
Owensboro, KY (Daviess, KY)	.8182
Oxnard-Ventura, CA (Ventura, CA)	1.2802
Panama City, FL (Bay, FL)	.8294
Parkersburg-Marietta, WV-OH (Washington, OH; Wood, WV)	.9054
Pascagoula, MS (Jackson, MS)	.9601
Pensacola, FL (Escambia, FL; Santa Rosa, FL)	.8667
Peoria, IL (Peoria, IL; Tazewell, IL; Woodford, IL)	1.0498
Philadelphia, PA–NJ (Burlington, NJ; Camden, NJ; Gloucester, NJ; Bucks, PA; Chester, PA; Delaware, PA; Montgomery, PA; Philadelphia, PA)	1.1781
Phoenix, AZ (Maricopa, AZ)	1.0224
Pine Bluff, AR (Jefferson, AR)	.7945
Pittsburgh, PA (Allegheny, PA; Fayette, PA; Washington, PA; Westmoreland, PA)	1.0322
Pittsfield, MA (Berkshire, MA)	1.0162
Portland, ME (Cumberland, ME; Sagadahoc, ME; York, ME)	1.0087
Portland, OR (Clackamas, OR; Multnomah, OR; Washington, OR; Yamhill, OR)	1.1980
Portsmouth-Dover-Rochester, NH (Rockingham, NH; Strafford, NH)	.9303
Poughkeepsie, NY (Dutchess, NY)	1.0152

TABLE 4a.—WAGE INDEX FOR URBAN AREAS—Continued

Urban area (constituent counties or county equivalents)	Wage index
Providence-Pawtucket-Woonsocket, RI (Bristol, RI; Kent, RI; Newport, RI; Providence, RI; Statewide, RI; Washington, RI)	1.0423
Provo-Orem, UT (Utah, UT)	.9776
Pueblo, CO (Pueblo, CO)	1.1121
Racine, WI (Racine, WI)	.9925
Raleigh-Durham, NC (Durham, NC; Franklin, NC; Orange, NC; Wake, NC)	.9639
Reading, PA (Berks, PA)	1.0162
Redding, CA (Shasta, CA)	1.2304
Reno, NV (Washoe, NV)	1.1743
Richland-Kennewick, WA (Benton, WA; Franklin, WA)	1.0174
Richmond-Petersburg, VA (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)	.9527
Riverside-San Bernardino, CA (Riverside, CA; San Bernardino, CA)	1.2416
Roanoke, VA (Botetourt, VA; Roanoke, VA; Roanoke City, VA; Salem City, VA)	.8929
Rochester, MN (Olmsted, MN)	1.0199
Rochester, NY (Livingston, NY; Monroe, NY; Ontario, NY; Orleans, NY; Wayne, NY)	1.0149
Rockford, IL (Boone, IL; Winnebago, IL)	1.1270
Sacramento, CA (Eldorado, CA; Placer, CA; Sacramento, CA; Yolo, CA)	1.2664
Saginaw-Bay City-Midland, MI (Bay, MI; Midland, MI; Saginaw, MI)	1.0984
St. Cloud, MN (Benton, MN; Sherburne, MN; Stearns, MN)	.9938
St. Joseph, MO (Buchanan, MO)	.9415
St. Louis, MO–IL (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)	1.0747
Salem, OR (Marion, OR; Polk, OR)	1.0884
Salinas-Seaside-Monterey, CA (Monterey, CA)	1.2478
Salt Lake City-Ogden, UT (Davis, UT; Salt Lake, UT; Weber, UT)	1.0274
San Angelo, TX (Tom Green, TX)	.8655
San Antonio, TX (Bexar, TX; Comal, TX; Guadalupe, TX)	.8879
San Diego, CA (San Diego, CA)	1.3001
San Francisco, CA (Marin, CA; San Francisco, CA; San Mateo, CA)	1.6376
San Jose, CA (Santa Clara, CA)	1.4695
Santa Barbara-Santa Maria-Lompoc, CA (Santa Barbara, CA)	1.1743
Santa Cruz, CA (Santa Cruz, CA)	1.2341
Santa Fe, NM (Los Alamos, NM; Santa Fe, NM)	.9738
Santa Rosa-Petaluma, CA (Sonoma, CA)	1.3014
Sarasota, FL (Sarasota, FL)	.9564
Savannah, GA (Chatham, GA; Effingham, GA)	.8842
Scranton-Wilkes Barre, PA (Columbia, PA; Lackawanna, PA; Luzerne, PA; Monroe, PA; Wyoming, PA)	.9900
Seattle, WA (King, WA; Snohomish, WA)	1.1494
Sharon, PA (Mercer, PA)	.9676
Sheboygan, WI (Sheboygan, WI)	.9813
Sherman-Denison, TX (Grayson, TX)	.8555
Shreveport, LA (Bossier, LA; Caddo, LA)	.9539
Sioux City, IA–NE (Woodbury, IA; Dakota, NE)	.9988
Sioux Falls, SD (Minnehaha, SD)	1.0137
South Bend-Mishawaka, IN (St. Joseph, IN)	1.0012
Spokane, WA (Spokane, WA)	1.1469
Springfield, IL (Menard, IL; Sangamon, IL)	1.0585
Springfield, MO (Christian, MO; Greene, MO)	.9788
Springfield, MA (Hampden, MA; Hampshire, MA)	.9988
State College, PA (Centre, PA)	1.0685
Steubenville-Weirton, OH–WV (Jefferson, OH; Brooke, WV; Hancock, WV)	.9577
Stockton, CA (San Joaquin, CA)	1.2765
Syracuse, NY (Madison, NY; Onondaga, NY; Oswego, NY)	1.0386
Tacoma, WA (Pierce, WA)	1.0971
Tallahassee, FL (Gadsden, FL; Leon, FL)	.9440
Tampa-St. Petersburg-Clearwater, FL (Hernando, FL; Hillsborough, FL; Pasco, FL; Pinellas, FL)	.9751
Terre Haute, IN (Clay, IN; Vigo, IN)	.8506
Texarkana-TX-Texarkana, AR (Miller, AR; Bowie, TX)	.8580
Toledo, OH (Fulton, OH; Lucas, OH; Wood, OH)	1.2167
Topeka, KS (Shawnee, KS)	1.0548
Trenton, NJ (Mercer, NJ)	1.0237
Tucson, AZ (Pima, AZ)	1.0012
Tulsa, OK (Creeks, OK; Osage, OK; Rogers, OK; Tulsa, OK; Wagoner, OK)	1.0050
Tuscaloosa, AL (Tuscaloosa, AL)	1.0087
Tyler, TX (Smith, TX)	.9963
Utica-Rome, NY (Herkimer, NY; Oneida, NY)	.8667
Vallejo-Fairfield-Napa, CA (Napa, CA; Solano, CA)	1.3288
Vancouver, WA (Clark, WA)	1.1569
Victoria, TX (Victoria, TX)	.8144
Vineland-Millville-Bridgeton, NJ (Cumberland, NJ)	.9851
Visalia-Tulare-Portervile, CA (Tulare, CA)	1.0560
Waco, TX (McLennan, TX)	.9041
Washington, D.C.-MD-VA (District of Columbia, DC; 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)	1.1868
Waterloo-Cedar Falls, IA (Black Hawk, IA; Bremer, IA)	.9913
Wausau, WI (Marathon, WI)	.9788
West Palm Beach-Boca Raton-Delray Beach, FL (Palm Beach, FL)	.9900
Wheeling, WV–OH (Belmont, OH; Marshall, WV; Ohio, WV)	.9689
Wichita, KS (Butler, KS; Sedgwick, KS)	1.1494
Wichita Falls, TX (Wichita, TX)	.8705
Williamsport, PA (Lycoming, PA)	.8979
Wilmington, DE-NJ-MD (New Castle, DE; Cecil, MD; Salem, NJ)	1.0511
Wilmington, NC (New Hanover, NC)	.9514
Worcester-Fitchburg-Leominster, MA (Worcester, MA)	.9950
Yakima, WA (Yakima, WA)	1.0311
York, PA (Adams, PA; York, PA)	.9776
Youngstown-Warren, OH (Mahoning, OH; Trumbull, OH)	1.0399
Yuba City, CA (Sutter, CA; Yuba, CA)	1.0374

TABLE 4b.—WAGE INDEX FOR RURAL AREAS

Non-urban area	Wage index
Alabama	.7435
Alaska	1.4869
Arizona	.9128
Arkansas	.7646
California	1.1370
Colorado	.9253
Connecticut	1.0374
Delaware	.8580
Florida	.8742
Georgia	.7721
Hawaii	1.0075
Idaho	.9054
Illinois	.8842
Indiana	.8618
Iowa	.8655
Kansas	.8418
Kentucky	.7970
Louisiana	.8543
Maine	.8580
Maryland	.8705
Massachusetts	.0511
Michigan	.9514
Minnesota	.8717
Mississippi	.7646
Missouri	.8257
Montana	.9078
Nebraska	.8244
Nevada	1.0710
New Hampshire	.9178
New Jersey*	
New Mexico	.9141
New York	.8755
North Carolina	.8082
North Dakota	.8991
Ohio	.9029
Oklahoma	.8418
Oregon	1.0697
Pennsylvania	.9352
Rhode Island*	
South Carolina	.7771
South Dakota	.8394
Tennessee	.7684
Texas	.8120
Utah	.9427
Vermont	.8817
Virginia	.8157
Washington	1.0167
West Virginia	.8742
Wisconsin	.8929
Wyoming	.9664

*All counties within the State are classified urban.

BILLING CODE 4120-01-M

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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
1	1 SURG		CRANIOTOMY AGE >17 EXCEPT FOR TRAUMA	3.5526	16.0	33
2	1 SURG		CRANIOTOMY FOR TRAUMA AGE >17	3.7716	13.4	30
3	1 SURG	*	CRANIOTOMY AGE <18	2.9163	12.7	30
4	1 SURG		SPINAL PROCEDURES	2.7305	14.9	32
5	1 SURG		EXTRACRANIAL VASCULAR PROCEDURES	1.6572	7.9	25
6	1 SURG		CARPAL TUNNEL RELEASE	.4105	2.3	7
7	1 SURG		PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE >69 +/OR C.C.	1.3087	5.9	23
8	1 SURG		PERIPH + CRANIAL NERVE + OTHER NERV SYST PROC AGE <70 W/O C.C.	.7303	3.6	17
9	1 MED		SPINAL DISORDERS + INJURIES	1.4319	6.3	25
10	1 MED		NERVOUS SYSTEM NEOPLASMS AGE >69 AND/OR C.C.	1.1342	7.7	25
11	1 MED		NERVOUS SYSTEM NEOPLASMS AGE <70 W/O C.C.	.8333	6.0	23
12	1 MED		DEGENERATIVE NERVOUS SYSTEM DISORDERS	1.0102	7.6	25
13	1 MED		MULTIPLE SCLEROSIS + CEREBELLAR ATAXIA	.9582	7.8	25
14	1 MED		SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TIA	1.3148	8.5	26
15	1 MED		TRANSIENT ISCHEMIC ATTACK AND PRECEREBRAL OCCLUSIONS	.6262	4.6	19
16	1 MED		NONSPECIFIC CEREBROVASCULAR DISORDERS WITH C.C.	.9071	6.7	24
17	1 MED		NONSPECIFIC CEREBROVASCULAR DISORDERS W/O C.C.	.6641	5.6	23
18	1 MED		CRANIAL + PERIPHERAL NERVE DISORDERS AGE >69 AND/OR C.C.	.7430	5.8	23
19	1 MED		CRANIAL + PERIPHERAL NERVE DISORDERS AGE <70 W/O C.C.	.6347	4.9	22
20	1 MED		NERVOUS SYSTEM INFECTION EXCEPT VIRAL MENINGITIS	1.3675	7.7	25
21	1 MED		VIRAL MENINGITIS	1.3032	7.8	25
22	1 MED		HYPERTENSIVE ENCEPHALOPATHY	.7070	5.0	20
23	1 MED		NONTRAUMATIC STUPOR + COMA	1.1319	5.2	22
24	1 MED		SEIZURE + HEADACHE AGE >69 AND/OR C.C.	.7615	5.0	22
25	1 MED		SEIZURE + HEADACHE AGE 18-69 W/O C.C.	.5566	4.0	18
26	1 MED		SEIZURE + HEADACHE AGE 0-17	.6624	2.8	15
27	1 MED		TRAUMATIC STUPOR + COMA, COMA >1 HR	1.5041	4.6	22
28	1 MED		TRAUMATIC STUPOR + COMA, COMA <1 HR AGE >69 AND/OR C.C.	.9338	5.0	22
29	1 MED		TRAUMATIC STUPOR + COMA <1 HR AGE 18-69 W/O C.C.	.6469	3.6	21
30	1 MED	*	TRAUMATIC STUPOR + COMA <1 HR AGE 0-17	.3539	2.0	8
31	1 MED		CONCUSSION AGE >69 AND/OR C.C.	.5396	3.8	20
32	1 MED		CONCUSSION AGE 18-69 W/O C.C.	.4058	2.8	13
33	1 MED	*	CONCUSSION AGE 0-17	.2457	1.6	5
34	1 MED		OTHER DISORDERS OF NERVOUS SYSTEM AGE >69 AND/OR C.C.	.9726	6.0	23
35	1 MED		OTHER DISORDERS OF NERVOUS SYSTEM AGE <70 W/O C.C.	.7453	4.5	22

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*** DRGS 469 AND 470 CONTAIN CASES WHICH COULD NOT BE ASSIGNED TO VALID DRGS.

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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
36	2	SURG	RETINAL PROCEDURES	.7145	4.1	12
37	2	SURG	ORBITAL PROCEDURES	.6645	3.2	12
38	2	SURG	PRIMARY IRIS PROCEDURES	.3992	2.4	8
39	2	SURG	LENS PROCEDURES	.5766	2.1	4
40	2	SURG	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE >17	.4150	2.1	6
41	2	SURG *	EXTRAOCULAR PROCEDURES EXCEPT ORBIT AGE 0-17	.3658	1.6	4
42	2	SURG	INTRAOCULAR PROCEDURES EXCEPT RETINA, IRIS + LENS	.6579	3.0	10
43	2	MED	HYPHEMA	.3429	3.6	13
44	2	MED	ACUTE MAJOR EYE INFECTIONS	.6466	5.9	21
45	2	MED	NEUROLOGICAL EYE DISORDERS	.5449	3.6	14
46	2	MED	OTHER DISORDERS OF THE EYE AGE >17 WITH C.C.	.6006	3.6	21
47	2	MED	OTHER DISORDERS OF THE EYE AGE >17 W/O C.C.	.4240	2.5	11
48	2	MED *	OTHER DISORDERS OF THE EYE AGE 0-17	.4018	2.9	13
49	3	SURG	MAJOR HEAD + NECK PROCEDURES	2.8612	12.9	30
50	3	SURG	SIALOADENECTOMY	.7065	3.7	11
51	3	SURG	SALIVARY GLAND PROCEDURES EXCEPT SIALOADENECTOMY	.5948	3.3	10
52	3	SURG	CLEFT LIP + PALATE REPAIR	.7110	3.5	13
53	3	SURG	SINUS + MASTOID PROCEDURES AGE >17	.6199	3.0	10
54	3	SURG *	SINUS + MASTOID PROCEDURES AGE 0-17	.6689	3.2	11
55	3	SURG	MISCELLANEOUS EAR, NOSE + THROAT PROCEDURES	.4354	2.1	6
56	3	SURG	RHINOPLASTY	.4415	2.3	7
57	3	SURG	T+A PROC EXCEPT TONSILLECTOMY +/OR ADENOIDECTOMY ONLY, AGE >17	.7857	3.6	20
58	3	SURG *	T+A PROC EXCEPT TONSILLECTOMY +/OR ADENOIDECTOMY ONLY, AGE 0-17	.3098	1.5	3
59	3	SURG	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE >17	.4179	2.4	7
60	3	SURG *	TONSILLECTOMY AND/OR ADENOIDECTOMY ONLY AGE 0-17	.2616	1.5	3
61	3	SURG	MYRINGOTOMY WITH TUBE INSERTION AGE >17	.4335	2.0	9
62	3	SURG *	MYRINGOTOMY WITH TUBE INSERTION AGE 0-17	.3089	1.3	3
63	3	SURG	OTHER EAR, NOSE + THROAT O.R. PROCEDURES	1.1446	5.0	22
64	3	MED	EAR, NOSE + THROAT MALIGNANCY	.9766	4.7	22
65	3	MED	DYSEQUILIBRIUM	.4527	3.8	14
66	3	MED	EPISTAXIS	.4166	3.3	13
67	3	MED	EPIGLOTTITIS	.9418	4.8	21
68	3	MED	OTITIS MEDIA + URI AGE >69 AND/OR C.C.	.6112	5.1	17
69	3	MED	OTITIS MEDIA + URI AGE 18-69 W/O C.C.	.5059	4.1	14
70	3	MED	OTITIS MEDIA + URI AGE 0-17	.5529	3.5	14

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
71	3 MED		LARYNGOTRACHEITIS	.6405	4.5	17
72	3 MED		NASAL TRAUMA + DEFORMITY	.5286	3.5	19
73	3 MED		OTHER EAR, NOSE + THROAT DIAGNOSES AGE >17	.6025	3.4	17
74	3 MED	*	OTHER EAR, NOSE + THROAT DIAGNOSES AGE 0-17	.3427	2.1	9
75	4 SURG		MAJOR CHEST PROCEDURES	2.9497	13.3	30
76	4 SURG		OTHER RESPIRATORY SYSTEM O.R. PROCEDURES WITH C.C.	2.4805	10.1	27
77	4 SURG		OTHER RESPIRATORY SYSTEM O.R. PROCEDURES W/O C.C.	1.6525	6.9	24
78	4 MED		PULMONARY EMBOLISM	1.4904	9.5	27
79	4 MED		RESPIRATORY INFECTIONS + INFLAMMATIONS AGE >69 AND/OR C.C.	1.9337	9.6	27
80	4 MED		RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 18-69 W/O C.C.	1.4201	6.4	25
81	4 MED	*	RESPIRATORY INFECTIONS + INFLAMMATIONS AGE 0-17	.8652	6.1	23
82	4 MED		RESPIRATORY NEOPLASMS	1.1297	6.5	24
83	4 MED		MAJOR CHEST TRAUMA AGE >69 AND/OR C.C.	.8352	6.6	24
84	4 MED		MAJOR CHEST TRAUMA AGE <70 W/O C.C.	.6028	4.7	20
85	4 MED		PLEURAL EFFUSION AGE >69 AND/OR C.C.	1.1227	7.2	24
86	4 MED		PLEURAL EFFUSION AGE <70 W/O C.C.	.8798	5.8	23
87	4 MED		PULMONARY EDEMA + RESPIRATORY FAILURE	1.7961	7.0	24
88	4 MED		CHRONIC OBSTRUCTIVE PULMONARY DISEASE	1.0806	6.6	24
89	4 MED		SIMPLE PNEUMONIA + PLEURISY AGE >69 AND/OR C.C.	1.1765	7.5	25
90	4 MED		SIMPLE PNEUMONIA + PLEURISY AGE 18-69 W/O C.C.	.8929	6.2	21
91	4 MED		SIMPLE PNEUMONIA + PLEURISY AGE 0-17	.7897	4.5	19
92	4 MED		INTERSTITIAL LUNG DISEASE AGE >69 AND/OR C.C.	1.1037	6.7	24
93	4 MED		INTERSTITIAL LUNG DISEASE AGE <70 W/O C.C.	.8728	5.4	22
94	4 MED		PNEUMOTHORAX AGE >69 AND/OR C.C.	1.3048	7.6	25
95	4 MED		PNEUMOTHORAX AGE <70 W/O C.C.	.8660	5.7	23
96	4 MED		BRONCHITIS + ASTHMA AGE >69 AND/OR C.C.	.8486	6.0	20
97	4 MED		BRONCHITIS + ASTHMA AGE 18-69 W/O C.C.	.7155	5.1	17
98	4 MED		BRONCHITIS + ASTHMA AGE 0-17	.7248	3.7	12
99	4 MED		RESPIRATORY SIGNS + SYMPTOMS AGE >69 AND/OR C.C.	.8071	4.6	21
100	4 MED		RESPIRATORY SIGNS + SYMPTOMS AGE <70 W/O C.C.	.6352	3.6	16
101	4 MED		OTHER RESPIRATORY DIAGNOSES AGE >69 AND/OR C.C.	.8448	5.5	23
102	4 MED		OTHER RESPIRATORY DIAGNOSES AGE <70	.6617	4.2	20
103	5 SURG		HEART TRANSPLANT	.0000		
104	5 SURG		CARDIAC VALVE PROCEDURE WITH PUMP + WITH CARDIAC CATH	7.1333	17.6	35
105	5 SURG		CARDIAC VALVE PROCEDURE WITH PUMP + W/O CARDIAC CATH	6.3223	14.9	32

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
106	5	SURG	CORONARY BYPASS WITH CARDIAC CATH	5.3018	14.6	32
107	5	SURG	CORONARY BYPASS W/O CARDIAC CATH	4.6824	12.7	30
108	5	SURG	CARDIOTHOR PROC,EXCEPT VALVE + CORONARY BYPASS,WITH PUMP	5.3971	11.2	28
109	5	SURG	CARDIOTHORACIC PROCEDURES W/O PUMP	4.3085	8.9	26
110	5	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE >69 AND/OR C.C.	3.2807	12.9	30
111	5	SURG	MAJOR RECONSTRUCTIVE VASCULAR PROCEDURES AGE <70 W/O C.C.	2.4773	11.1	28
112	5	SURG	VASCULAR PROCEDURES EXCEPT MAJOR RECONSTRUCTION	2.2247	8.1	25
113	5	SURG	AMPUTATION FOR CIRC SYSTEM DISORDERS EXCEPT UPPER LIMB + TOE	2.4958	16.8	34
114	5	SURG	UPPER LIMB + TOE AMPUTATION FOR CIRC SYSTEM DISORDERS	1.8814	11.8	29
115	5	SURG	PERMANENT CARDIAC PACEMAKER IMPLANT WITH AMI OR CHF	4.1754	13.8	31
116	5	SURG	PERMANENT CARDIAC PACEMAKER IMPLANT W/O AMI OR CHF	2.9808	7.7	25
117	5	SURG	CARDIAC PACEMAKER REPLACE + REVIS EXC PULSE GEN REPL ONLY	1.4658	4.8	20
118	5	SURG	CARDIAC PACEMAKER PULSE GENERATOR REPLACEMENT ONLY	1.8835	3.4	14
119	5	SURG	VEIN LIGATION + STRIPPING	.9238	5.6	23
120	5	SURG	OTHER O.R. PROCEDURES ON THE CIRCULATORY SYSTEM	2.2700	11.2	28
121	5	MED	CIRCULATORY DISORDERS WITH AMI + C.V. COMP. DISCH. ALIVE	1.7771	10.3	27
122	5	MED	CIRCULATORY DISORDERS WITH AMI W/O C.V. COMP. DISCH. ALIVE	1.3399	8.8	26
123	5	MED	CIRCULATORY DISORDERS WITH AMI, EXPIRED	1.3549	3.0	20
124	5	MED	CIRCULATORY DISORDERS EXC AMI,WITH CARD CATH + COMPLEX DIAG	1.2509	5.0	22
125	5	MED	CIRCULATORY DISORDERS EXC AMI,WITH CARD CATH W/O COMPLEX DIAG	.7353	2.9	11
126	5	MED	ACUTE + SUBACUTE ENDOCARDITIS	3.0006	18.2	35
127	5	MED	HEART FAILURE + SHOCK	1.0136	6.7	24
128	5	MED	DEEP VEIN THROMBOPHLEBITIS	.8483	8.6	24
129	5	MED	CARDIAC ARREST, UNEXPLAINED	1.7386	3.8	21
130	5	MED	PERIPHERAL VASCULAR DISORDERS AGE >69 AND/OR C.C.	.8163	5.6	23
131	5	MED	PERIPHERAL VASCULAR DISORDERS AGE <70 W/O C.C.	.6661	4.4	21
132	5	MED	ATHEROSCLEROSIS AGE >69 AND/OR C.C.	.8090	5.3	22
133	5	MED	ATHEROSCLEROSIS AGE <70 W/O C.C.	.7087	3.8	16
134	5	MED	HYPERTENSION	.6394	5.1	20
135	5	MED	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE >69 AND/OR C.C.	.8985	5.2	22
136	5	MED	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 18-69 W/O C.C.	.7360	3.8	17
137	5	MED *	CARDIAC CONGENITAL + VALVULAR DISORDERS AGE 0-17	.6315	3.3	20
138	5	MED	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE >69 AND/OR C.C.	.8174	4.9	21
139	5	MED	CARDIAC ARRHYTHMIA + CONDUCTION DISORDERS AGE <70 W/O C.C.	.6575	3.5	16
140	5	MED	ANGINA PECTORIS	.6951	4.6	16

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
141	5 MED		SYNCOPE + COLLAPSE AGE >69 AND/OR C.C.	.6226	4.4	17
142	5 MED		SYNCOPE + COLLAPSE AGE <70 W/O C.C.	.5376	3.6	14
143	5 MED		CHEST PAIN	.5943	3.5	13
144	5 MED		OTHER CIRCULATORY DIAGNOSES WITH C.C.	1.1200	6.2	23
145	5 MED		OTHER CIRCULATORY DIAGNOSES W/O C.C.	.8502	5.0	22
146	6 SURG		RECTAL RESECTION AGE >69 AND/OR C.C.	3.0595	16.5	34
147	6 SURG		RECTAL RESECTION AGE <70 W/O C.C.	2.2998	14.0	31
148	6 SURG		MAJOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C.C.	2.9151	15.1	32
149	6 SURG		MAJOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C.C.	2.1111	12.6	30
150	6 SURG		PERITONEAL ADHESIOLYSIS AGE >69 AND/OR C.C.	2.3371	12.6	30
151	6 SURG		PERITONEAL ADHESIOLYSIS AGE <70 W/O C.C.	1.6190	10.1	27
152	6 SURG		MINOR SMALL + LARGE BOWEL PROCEDURES AGE >69 AND/OR C.C.	1.4162	8.5	26
153	6 SURG		MINOR SMALL + LARGE BOWEL PROCEDURES AGE <70 W/O C.C.	1.1096	7.3	24
154	6 SURG		STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE >69 AND/OR C.C.	2.6479	11.3	28
155	6 SURG		STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 18-69 W/O C.C.	1.7601	8.9	26
156	6 SURG	*	STOMACH, ESOPHAGEAL + DUODENAL PROCEDURES AGE 0-17	.8382	6.0	20
157	6 SURG		ANAL AND STOMAL PROCEDURES AGE >69 AND/OR C.C.	.7329	4.3	21
158	6 SURG		ANAL AND STOMAL PROCEDURES AGE <70 W/O C.C.	.5571	3.9	14
159	6 SURG		HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE >69 AND/OR C.C.	1.0035	6.3	22
160	6 SURG		HERNIA PROCEDURES EXCEPT INGUINAL + FEMORAL AGE 18-69 W/O C.C.	.7345	5.0	16
161	6 SURG		INGUINAL + FEMORAL HERNIA PROCEDURES AGE >69 AND/OR C.C.	.6569	4.4	14
162	6 SURG		INGUINAL + FEMORAL HERNIA PROCEDURES AGE 18-69 W/O C.C.	.5304	3.6	13
163	6 SURG		HERNIA PROCEDURES AGE 0-17	.9064	4.1	17
164	6 SURG		APPENDECTOMY WITH COMPLICATED PRINC. DIAG AGE>69 AND/OR C.C.	2.0821	10.7	27
165	6 SURG		APPENDECTOMY WITH COMPLICATED PRINC. DIAG AGE <70 W/O C.C.	1.4516	8.4	19
166	6 SURG		APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE >69 AND/OR C.C.	1.3678	7.5	23
167	6 SURG		APPENDECTOMY W/O COMPLICATED PRINC. DIAG AGE <70 W/O C.C.	.9005	5.3	14
168	6 SURG		PROCEDURES ON THE MOUTH AGE >69 AND/OR C.C.	.9421	4.1	21
169	6 SURG		PROCEDURES ON THE MOUTH AGE <70 W/O C.C.	.6680	3.0	12
170	6 SURG		OTHER DIGESTIVE SYSTEM PROCEDURES AGE >69 AND/OR C.C.	2.7543	12.2	29
171	6 SURG		OTHER DIGESTIVE SYSTEM PROCEDURES AGE <70 W/O C.C.	2.3060	9.6	27
172	6 MED		DIGESTIVE MALIGNANCY AGE >69 AND/OR C.C.	1.0780	6.7	24
173	6 MED		DIGESTIVE MALIGNANCY AGE <70 W/O C.C.	.9650	5.3	22
174	6 MED		G.I. HEMORRHAGE AGE >69 AND/OR C.C.	.9095	5.8	23
175	6 MED		G.I. HEMORRHAGE AGE <70 W/O C.C.	.7123	4.7	18

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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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
176	6	MED	COMPLICATED PEPTIC ULCER	.9333	5.3	23
177	6	MED	UNCOMPLICATED PEPTIC ULCER >69 AND/OR C.C.	.6642	5.4	18
178	6	MED	UNCOMPLICATED PEPTIC ULCER <70 W/O C.C.	.5624	4.6	15
179	6	MED	INFLAMMATORY BOWEL DISEASE	.9896	7.0	24
180	6	MED	G.I. OBSTRUCTION AGE >69 AND/OR C.C.	.7625	5.4	22
181	6	MED	G.I. OBSTRUCTION AGE <70 W/O C.C.	.5872	4.5	18
182	6	MED	ESOPHAGITIS,GASTROENT.* MISC. DIGEST. DIS AGE >69 +/OR C.C.	.6036	4.7	16
183	6	MED	ESOPHAGITIS,GASTROENT.* MISC. DIGEST. DIS AGE 18-69 W/O C.C.	.5135	4.0	15
184	6	MED	ESOPHAGITIS, GASTROENTERITIS + MISC. DIGEST. DISORDERS AGE 0-17	.5426	2.8	14
185	6	MED	DENTAL + ORAL DIS. EXC EXTRACTIONS + RESTORATIONS,AGE >17	.7160	4.3	21
186	6	MED *	DENTAL + ORAL DIS. EXC EXTRACTIONS + RESTORATIONS,AGE 0-17	.4112	2.9	11
187	6	MED	DENTAL EXTRACTIONS + RESTORATIONS	.4225	2.3	7
188	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE >69 AND/OR C.C.	.7110	4.3	21
189	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 18-69 W/O C.C.	.5312	3.3	17
190	6	MED	OTHER DIGESTIVE SYSTEM DIAGNOSES AGE 0-17	.9611	4.5	22
191	7	SURG	MAJOR PANCREAS, LIVER + SHUNT PROCEDURES	4.4168	17.9	35
192	7	SURG	MINOR PANCREAS, LIVER + SHUNT PROCEDURES	3.9294	16.2	33
193	7	SURG	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE >69 +/OR C.C.	2.8129	15.6	33
194	7	SURG	BILIARY TRACT PROC EXC TOT CHOLECYSTECTOMY AGE <70 W/O C.C.	2.1151	12.4	29
195	7	SURG	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE >69 AND/OR C.C.	2.2596	13.1	30
196	7	SURG	TOTAL CHOLECYSTECTOMY WITH C.D.E. AGE <70 W/O C.C.	1.6131	10.3	22
197	7	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE >69 AND/OR C.C.	1.7061	10.5	26
198	7	SURG	TOTAL CHOLECYSTECTOMY W/O C.D.E. AGE <70 W/O C.C.	1.1463	8.0	17
199	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR MALIGNANCY	2.3479	14.1	31
200	7	SURG	HEPATOBILIARY DIAGNOSTIC PROCEDURE FOR NON-MALIGNANCY	2.5679	10.8	28
201	7	SURG	OTHER HEPATOBILIARY OR PANCREAS O.R. PROCEDURES	2.5367	8.8	26
202	7	MED	CIRRHOSIS + ALCOHOLIC HEPATITIS	1.1653	7.7	25
203	7	MED	MALIGNANCY OF HEPATOBILIARY SYSTEM OR PANCREAS	1.0373	6.8	24
204	7	MED	DISORDERS OF PANCREAS EXCEPT MALIGNANCY	.9747	6.4	23
205	7	MED	DISORDERS OF LIVER EXC MALIG,CIRR,ALC HEPA AGE >69 AND/OR C.C.	1.0733	6.7	24
206	7	MED	DISORDERS OF LIVER EXC MALIG,CIPR,ALC HEPA AGE <70 W/O C.C.	.7752	5.0	22
207	7	MED	DISORDERS OF THE BILIARY TRACT AGE >69 AND/OR C.C.	.7820	5.4	22
208	7	MED	DISORDERS OF THE BILIARY TRACT AGE <70 W/O C.C.	.5851	4.0	16
209	8	SURG	MAJOR JOINT AND LIMB REATTACHMENT PROCEDURES	2.4018	14.4	31
210	8	SURG	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE >69 AND/OR C.C.	2.0409	14.7	32

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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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
211	8	SURG	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 18-69 W/O C.C.	1.7951	12.7	30
212	8	SURG	HIP + FEMUR PROCEDURES EXCEPT MAJOR JOINT AGE 0-17	1.6990	8.8	24
213	8	SURG	AMPUTATIONS FOR MUSCULOSKELETAL SYSTEM + CONN. TISSUE DISORDERS	2.0969	12.6	30
214	8	SURG	BACK + NECK PROCEDURES AGE >69 AND/OR C.C.	1.6774	13.1	30
215	8	SURG	BACK + NECK PROCEDURES AGE <70 W/O C.C.	1.4374	10.2	27
216	8	SURG	BIOPSIES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	1.5472	8.8	26
217	8	SURG	WND DEBRID + SKN GRFT EXC HAND,FOR MUSCSKELETAL + CONN.TISS.DIS	2.1262	10.3	27
218	8	SURG	LOWER EXTREM + HUMER PROC EXC HIP,FOOT,FEMUR AGE >69 +/OR C.C.	1.3806	8.8	26
219	8	SURG	LOWER EXTREM + HUMER PROC EXC HIP,FOOT,FEMUR AGE 18-69 W/O C.C.	1.0526	6.7	22
220	8	SURG *	LOWER EXTREM + HUMER PROC EXC HIP,FOOT,FEMUR AGE 0-17	.9242	5.3	22
221	8	SURG	KNEE PROCEDURES AGE >69 AND/OR C.C.	.9801	4.7	22
222	8	SURG	KNEE PROCEDURES AGE <70 W/O C.C.	.7250	3.4	15
223	8	SURG	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE >69 AND/OR C.C.	.9703	5.2	22
224	8	SURG	UPPER EXTREMITY PROC EXC HUMERUS + HAND AGE <70 W/O C.C.	.7918	4.1	15
225	8	SURG	FOOT PROCEDURES	.6590	3.9	13
226	8	SURG	SOFT TISSUE PROCEDURES AGE >69 AND/OR C.C.	.9545	5.3	22
227	8	SURG	SOFT TISSUE PROCEDURES AGE <70 W/O C.C.	.6780	3.6	16
228	8	SURG	GANGLION (HAND) PROCEDURES	.3691	1.9	5
229	8	SURG	HAND PROCEDURES EXCEPT GANGLION	.6238	2.9	12
230	8	SURG	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES OF HIP + FEMUR	1.0405	6.0	23
231	8	SURG	LOCAL EXCISION + REMOVAL OF INT FIX DEVICES EXCEPT HIP + FEMUR	.7545	3.8	19
232	8	SURG	ARTHROSCOPY	.6640	3.1	14
233	8	SURG	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE >69 +/OR C.C.	1.3734	8.1	25
234	8	SURG	OTHER MUSCULOSKELET SYS + CONN TISS O.R. PROC AGE <70 W/O C.C.	.9409	5.3	22
235	8	MED	FRACTURES OF FEMUR	1.4357	10.3	27
236	8	MED	FRACTURES OF HIP + PELVIS	1.0823	8.8	26
237	8	MED	SPRAINS, STRAINS, + DISLOCATIONS OF HIP, PELVIS + THIGH	.6133	5.5	23
238	8	MED	OSTEOMYELITIS	1.6319	11.0	28
239	8	MED	PATHOLOGICAL FRACTURES + MUSCULOSKELETAL + CONN.TISS.MALIGNANCY	.9280	7.5	25
240	8	MED	CONNECTIVE TISSUE DISORDERS AGE >69 AND/OR C.C.	.9035	7.2	24
241	8	MED	CONNECTIVE TISSUE DISORDERS AGE <70 W/O C.C.	.7525	6.2	23
242	8	MED	SEPTIC ARTHRITIS	1.4540	9.7	27
243	8	MED	MEDICAL BACK PROBLEMS	.6902	6.2	23
244	8	MED	BONE DISEASES + SEPTIC ARTHROPATHY AGE >69 AND/OR C.C.	.6783	6.1	23
245	8	MED	BONE DISEASES + SEPTIC ARTHROPATHY AGE <70 W/O C.C.	.6532	5.1	22

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TABLE 5

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
246	8 MED		NON-SPECIFIC ARTHROPATHIES	.6007	5.4	21
247	8 MED		SIGNS + SYMPTOMS OF MUSCULOSKELETAL SYSTEM + CONN TISSUE	.5817	4.7	21
248	8 MED		TENDONITIS, MYOSITIS + BURSITIS	.5906	4.8	20
249	8 MED		AFTERCARE, MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	.7681	5.5	23
250	8 MED		FX,SPRNS,STRNS + DISL OF FOREARM,HAND,FOOT AGE >69 +/OR C.C.	.5186	3.8	20
251	8 MED		FX,SPRNS,STRNS + DISL OF FOREARM,HAND,FOOT AGE 18-69 W/O C.C.	.4042	2.5	11
252	8 MED	*	FX,SPRNS,STRNS + DISL OF FOREARM,HAND,FOOT AGE 0-17	.3496	1.8	7
253	8 MED		FX,SPRNS,STRNS + DISL OF UPARM,LOWLEG EX FOOT AGE >69 +/OR C.C.	.6355	5.4	22
254	8 MED		FX,SPRNS,STRNS + DISL OF UPARM,LOWLEG EX FOOT AGE 18-69 W/O C.C.	.4953	4.0	20
255	8 MED	*	FX,SPRNS,STRNS + DISL OF UPARM,LOWLEG EX FOOT AGE 0-17	.4638	2.9	15
256	8 MED		OTHER DIAGNOSES OF MUSCULOSKELETAL SYSTEM + CONNECTIVE TISSUE	.7107	4.9	22
257	9 SURG		TOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C.C.	1.0809	7.8	19
258	9 SURG		TOTAL MASTECTOMY FOR MALIGNANCY AGE <70 W/O C.C.	.9806	6.9	16
259	9 SURG		SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE >69 AND/OR C.C.	.8644	4.9	22
260	9 SURG		SUBTOTAL MASTECTOMY FOR MALIGNANCY AGE <70	.6773	3.6	15
261	9 SURG		BREAST PROC FOR NON-MALIG EXCEPT BIOPSY + LOC EXC	.6223	3.4	11
262	9 SURG		BREAST BIOPSY + LOCAL EXCISION FOR NON-MALIGNANCY	.4301	2.4	6
263	9 SURG		SKIN-GRAFTS AND/OR DEBRID ULCER OR CELLULITIS AGE >69 AND/OR C.C.	2.3770	16.0	33
264	9 SURG		SKIN-GRAFTS AND/OR DEBRID ULCER OR CELLULITIS AGE <70 W/O C.C.	2.1879	14.9	32
265	9 SURG		SKIN-GRAFTS AND/OR DEBRID EXCEPT ULCER OR CELLULITIS WITH C.C.	1.3468	7.3	24
266	9 SURG		SKIN-GRAFTS AND/OR DEBRID EXCEPT ULCER OR CELLULITIS W/O C.C.	.7208	4.0	21
267	9 SURG		PERIANAL + PILONIDAL PROCEDURES	.6270	4.0	16
268	9 SURG		SKIN,SUBCUTANEOUS TISSUE + BREAST PLASTIC PROCEDURES	.5748	2.8	12
269	9 SURG		OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE >69 +/OR C.C.	1.1155	5.4	22
270	9 SURG		OTHER SKIN, SUBCUT TISS + BREAST O.R. PROC AGE <70 W/O C.C.	.7667	3.8	21
271	9 MED		SKIN ULCERS	1.2427	10.0	27
272	9 MED		MAJOR SKIN DISORDERS AGE >69 AND/OR C.C.	.8533	7.2	24
273	9 MED		MAJOR SKIN DISORDERS AGE <70 W/O C.C.	.8029	6.6	24
274	9 MED		MALIGNANT BREAST DISORDERS AGE >69 AND/OR C.C.	1.0429	7.0	24
275	9 MED		MALIGNANT BREAST DISORDERS AGE <70 W/O C.C.	.9784	5.8	23
276	9 MED		NON-MALIGANT BREAST DISORDERS	.5579	3.4	18
277	9 MED		CELLULITIS AGE >69 AND/OR C.C.	.8910	7.3	24
278	9 MED		CELLULITIS AGE 18-69 W/O C.C.	.7630	6.2	23
279	9 MED		CELLULITIS AGE 0-17	1.5997	5.1	22
280	9 MED		TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE >69 +/OR C.C.	.5452	4.6	22

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
281	9 MED		TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 18-69 W/O C.C.	.9517	3.4	16
282	9 MED	*	TRAUMA TO THE SKIN, SUBCUT TISS + BREAST AGE 0-17	.3424	2.2	9
283	9 MED		MINOR SKIN DISORDERS AGE >69 AND/OR C.C.	.6379	5.0	22
284	9 MED		MINOR SKIN DISORDERS AGE <70 W/O C.C.	.5235	3.3	19
285	10 SURG		AMPUTATION OF LOWER LIMB FOR ENDOCRINE,NUTRITIONAL&METABOLIC DIS.	2.6469	18.0	38
286	10 SURG		ADRENAL + PITUITARY PROCEDURES	2.6339	13.2	36
287	10 SURG		SKIN GRAFTS + WOUND DEBRIDE FOR ENDOC,NUTRIT + METAB DISORDERS	2.2793	15.2	32
288	10 SURG		O.R. PROCEDURES FOR OBESITY	2.1274	9.8	27
289	10 SURG		PARATHYROID PROCEDURES	1.3191	6.3	24
290	10 SURG		THYROID PROCEDURES	.8610	5.0	14
291	10 SURG		THYROGLOSSAL PROCEDURES	.6184	3.4	11
292	10 SURG		OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE > 69 +/OR C.C.	2.4216	11.8	29
293	10 SURG		OTHER ENDOCRINE, NUTRIT + METAB O.R. PROC AGE <70 W/O C.C.	2.0057	9.3	26
294	10 MED		DIABETES AGE =>36	.7633	5.6	24
295	10 MED		DIABETES AGE 0-35	.6251	5.1	22
296	10 MED		NUTRITIONAL + MISC. METABOLIC DISORDERS AGE >69 AND/OR C.C.	.8240	6.0	23
297	10 MED		NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 18-69 W/O C.C.	.7010	4.9	22
298	10 MED		NUTRITIONAL + MISC. METABOLIC DISORDERS AGE 0-17	.8414	3.8	21
299	10 MED		INBORN ERRORS OF METABOLISM	.8007	5.2	22
300	10 MED		ENDOCRINE DISORDERS AGE >69 AND/OR C.C.	.9307	6.8	24
301	10 MED		ENDOCRINE DISORDERS AGE <70 W/O C.C.	.6904	5.1	22
302	11 SURG		KIDNEY TRANSPLANT	4.6235	21.3	38
303	11 SURG		KIDNEY,URETER + MAJOR BLADDER PROCEDURE FOR NEOPLASM	2.7630	14.1	31
304	11 SURG		KIDNEY,URETER + MAJ BLDR PROC FOR NON-MALIG AGE >69 +/OR C.C.	2.0261	10.7	28
305	11 SURG		KIDNEY,URETER + MAJ BLDR PROC FOR NON-MALIG AGE <70 W/O C.C.	1.5044	8.4	25
306	11 SURG		PROSTATECTOMY AGE >69 AND/OR C.C.	1.2844	8.1	25
307	11 SURG		PROSTATECTOMY AGE <70 W/O C.C.	.9669	6.4	19
308	11 SURG		MINOR BLADDER PROCEDURES AGE >69 AND/OR C.C.	1.1376	6.0	23
309	11 SURG		MINOR BLADDER PROCEDURES AGE <70 W/O C.C.	.8665	4.6	22
310	11 SURG		TRANSURETHRAL PROCEDURES AGE >69 AND/OR C.C.	.7289	4.2	17
311	11 SURG		TRANSURETHRAL PROCEDURES AGE <70 W/O C.C.	.5608	3.3	11
312	11 SURG		URETHRAL PROCEDURES, AGE >69 AND/OR C.C.	.7350	4.4	18
313	11 SURG		URETHRAL PROCEDURES, AGE 18-69 W/O C.C.	.5975	3.6	14
314	11 SURG	*	URETHRAL PROCEDURES, AGE 0-17	.4323	2.3	11
315	11 SURG		OTHER KIDNEY + URINARY TRACT O.R. PROCEDURES	2.7653	9.7	27

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
316	11	MED	RENAL FAILURE	1.3238	6.4	23
317	11	MED	ADMIT FOR RENAL DIALYSIS	.6573	2.6	12
318	11	MED	KIDNEY + URINARY TRACT NEOPLASMS AGE >69 AND/OR C.C.	.9235	5.5	23
319	11	MED	KIDNEY + URINARY TRACT NEOPLASMS AGE <70 W/O C.C.	.7652	3.8	21
320	11	MED	KIDNEY + URINARY TRACT INFECTIONS AGE >69 AND/OR C.C.	.8596	6.5	23
321	11	MED	KIDNEY + URINARY TRACT INFECTIONS AGE 18-69 W/O C.C.	.6773	5.1	19
322	11	MED	KIDNEY + URINARY TRACT INFECTIONS AGE 0-17	.6764	4.9	19
323	11	MED	URINARY STONES AGE >69 AND/OR C.C.	.5919	3.7	17
324	11	MED	URINARY STONES AGE <70 W/O C.C.	.4127	2.7	11
325	11	MED	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE >69 AND/OR C.C.	.6535	4.5	22
326	11	MED	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 18-69 W/O C.C.	.5238	3.5	16
327	11	MED	KIDNEY + URINARY TRACT SIGNS + SYMPTOMS AGE 0-17	.5268	3.0	20
328	11	MED	URETHRAL STRICTURE AGE >69 AND/OR C.C.	.5972	3.9	17
329	11	MED	URETHRAL STRICTURE AGE 18-69 W/O C.C.	.4919	3.0	12
330	11	MED *	URETHRAL STRICTURE AGE 0-17	.2788	1.6	5
331	11	MED	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE >69 AND/OR C.C.	.8177	5.3	22
332	11	MED	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 18-69 W/O C.C.	.6542	3.9	20
333	11	MED	OTHER KIDNEY + URINARY TRACT DIAGNOSES AGE 0-17	.8007	3.6	21
334	12	SURG	MAJOR MALE PELVIC PROCEDURES WITH C.C.	1.8139	12.2	28
335	12	SURG	MAJOR MALE PELVIC PROCEDURES W/O C.C.	1.4938	11.0	23
336	12	SURG	TRANSURETHRAL PROSTATECTOMY AGE >69 AND/OR C.C.	.9937	6.9	17
337	12	SURG	TRANSURETHRAL PROSTATECTOMY AGE <70 W/O C.C.	.7883	5.7	12
338	12	SURG	TESTES PROCEDURES, FOR MALIGNANCY	.8995	4.9	22
339	12	SURG	TESTES PROCEDURES, NON-MALIGNANT AGE >17	.5861	3.4	12
340	12	SURG *	TESTES PROCEDURES, NON-MALIGNANT AGE 0-17	.4335	2.4	7
341	12	SURG	PENIS PROCEDURES	1.0574	4.3	14
342	12	SURG	CIRCUMCISION AGE >17	.4315	2.4	8
343	12	SURG *	CIRCUMCISION AGE 0-17	.3788	1.7	4
344	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROCEDURES FOR MALIGNANCY	1.1200	6.3	23
345	12	SURG	OTHER MALE REPRODUCTIVE SYSTEM O.R. PROC EXCEPT FOR MALIG	.8158	4.8	21
346	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE >69 AND/OR C.C.	.8591	5.6	23
347	12	MED	MALIGNANCY, MALE REPRODUCTIVE SYSTEM, AGE <70 W/O C.C.	.6561	3.7	21
348	12	MED	BENIGN PROSTATIC HYPERTROPHY AGE >69 AND/OR C.C.	.6333	3.9	19
349	12	MED	BENIGN PROSTATIC HYPERTROPHY AGE <70 W/O C.C.	.4953	2.9	12
350	12	MED	INFLAMMATION OF THE MALE REPRODUCTIVE SYSTEM	.6291	4.8	17

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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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
351	12	MED	STERILIZATION, MALE	.3799	1.8	6
352	12	MED	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	.5354	3.3	16
353	13	SURG	PELVIC EVISCERATION, RADICAL HYSTERECTOMY + VULVECTOMY	1.8859	10.6	28
354	13	SURG	NON-RADICAL HYSTERECTOMY AGE >69 AND/OR C.C.	1.2409	9.8	19
355	13	SURG	NON-RADICAL HYSTERECTOMY AGE <70 W/O C.C.	.9354	7.4	13
356	13	SURG	FEMALE REPRODUCTIVE SYSTEM RECONSTRUCTIVE PROCEDURES	.8589	7.0	15
357	13	SURG	UTERUS + ADENEXA PROCEDURES, FOR MALIGNANCY	2.0984	12.2	29
358	13	SURG	UTERUS + ADENEXA PROC FOR NON-MALIGNANCY EXCEPT TUBAL INTERRUPT	1.1200	6.9	24
359	13	SURG	INCISIONAL TUBAL INTERRUPTION FOR NON-MALIGNANCY	.5122	2.8	9
360	13	SURG	VAGINA, CERVIX + VULVA PROCEDURES	.6007	3.4	15
361	13	SURG	LAPAROSCOPY + ENDOSCOPY (FEMALE) EXCEPT TUBAL INTERRUPTION	.7150	3.2	17
362	13	SURG	LAPAROSCOPIC TUBAL INTERRUPTION	.3625	1.8	4
363	13	SURG	D+C,CONIZATION + RADIO-IMPLANT, FOR MALIGNANCY	.6196	3.6	15
364	13	SURG	D+C,CONIZATION EXCEPT FOR MALIGNANCY	.3960	2.2	7
365	13	SURG	OTHER FEMALE REPRODUCTIVE SYSTEM O.R. PROCEDURES	1.9273	10.9	28
366	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE >69 AND/OR C.C.	.8644	4.9	22
367	13	MED	MALIGNANCY, FEMALE REPRODUCTIVE SYSTEM AGE <70 W/O C.C.	.5436	2.8	16
368	13	MED	INFECTIONS, FEMALE REPRODUCTIVE SYSTEM	.7569	5.9	23
369	13	MED	MENSTRUAL + OTHER FEMALE REPRODUCTIVE SYSTEM DISORDERS	.5571	3.9	20
370	14	SURG	CESAREAN SECTION WITH C.C.	1.1047	7.1	17
371	14	SURG	CESAREAN SECTION W/O C.C.	.7569	5.5	11
372	14	MED	VAGINAL DELIVERY WITH COMPLICATING DIAGNOSES	.6060	4.1	15
373	14	MED	VAGINAL DELIVERY W/O COMPLICATING DIAGNOSES	.3575	2.5	7
374	14	SURG	VAGINAL DELIVERY WITH STERILIZATION AND/OR D+C	.8671	5.3	7
375	14	SURG *	VAGINAL DELIVERY WITH O.R. PROC EXCEPT STERIL AND/OR D+C	.6817	4.4	15
376	14	MED	POSTPARTUM AND POSTABORTION DIAGNOSES W/O O.R. PROCEDURE	.4620	3.3	16
377	14	SURG	POSTPARTUM AND POSTABORTION DIAGNOSES WITH O.R. PROCEDURE	.6999	3.0	14
378	14	MED	ECTOPIC PREGNANCY	.7667	4.5	13
379	14	MED	THREATENED ABORTION	.2202	1.9	7
380	14	MED	ABORTION W/O D+C	.3322	1.8	8
381	14	MED	ABORTION WITH D+C OR ASPIRATION CURETTAGE	.3749	1.7	5
382	14	MED	FALSE LABOR	.1132	1.2	3
383	14	MED	OTHER ANTEPARTUM DIAGNOSES WITH MEDICAL COMPLICATIONS	.4512	3.4	16
384	14	MED	OTHER ANTEPARTUM DIAGNOSES W/O MEDICAL COMPLICATIONS	.4588	2.6	16
385	15		NEONATES, DIED OR TRANSFERRED	3.0262	9.0	26

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TABLE 5

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
386	15		EXTREME IMMATURITY OR RESPIRATORY DISTRESS SYNDROME, NEONATE	1.4695	8.7	26
387	15	*	PREMATURITY WITH MAJOR PROBLEMS	1.6267	13.3	30
388	15	*	PREMATURITY W/O MAJOR PROBLEMS	1.1571	8.6	26
389	15		FULL TERM NEONATE WITH MAJOR PROBLEMS	1.7703	9.2	26
390	15		NEONATES WITH OTHER SIGNIFICANT PROBLEMS	1.3101	6.3	23
391	15		NORMAL NEWBORN	1.6163	7.8	25
392	16	SURG	SPLENECTOMY AGE >17	3.0969	13.3	30
393	16	SURG *	SPLENECTOMY AGE 0-17	1.5206	9.1	26
394	16	SURG	OTHER O.R. PROCEDURES OF THE BLOOD + BLOOD FORMING ORGANS	1.0978	5.0	22
395	16	MED	RED BLOOD CELL DISORDERS AGE >17	.7240	4.7	22
396	16	MED	RED BLOOD CELL DISORDERS AGE 0-17	.2875	1.3	3
397	16	MED	COAGULATION DISORDERS	.9956	6.0	23
398	16	MED	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE >69 AND/OR C.C.	.9782	5.5	23
399	16	MED	RETICULOENDOTHELIAL + IMMUNITY DISORDERS AGE <70 W/O C.C.	.7425	4.3	21
400	17	SURG	LYMPHOMA OR LEUKEMIA WITH MAJOR O.R. PROCEDURE	2.6350	12.6	30
401	17	SURG	LYMPHOMA OR LEUKEMIA WITH OTHER O.R. PROC AGE >69 AND/OR C.C.	1.5680	9.1	25
402	17	SURG	LYMPHOMA OR LEUKEMIA WITH OTHER O.R. PROCEDURE AGE <70 W/O C.C.	1.0696	5.6	23
403	17	MED	LYMPHOMA OR LEUKEMIA AGE >69 AND/OR C.C.	1.3325	6.7	24
404	17	MED	LYMPHOMA OR LEUKEMIA AGE 18-69 W/O C.C.	1.0484	5.0	22
405	17	MED *	LYMPHOMA OR LEUKEMIA AGE 0-17	1.0408	4.9	22
406	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPLASM W MAJ O.R.PROC + C.C.	2.5280	12.8	30
407	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL W MAJ O.R.PROC W/O C.C.	1.7146	8.6	26
408	17	SURG	MYELOPROLIF DISORD OR POORLY DIFF NEOPL WITH MINOR O.R.PROC	1.0572	5.3	22
409	17	MED	RADIOTHERAPY	.9650	6.8	24
410	17	MED	CHEMOTHERAPY	.4351	2.4	9
411	17	MED	HISTORY OF MALIGNANCY W/O ENDOSCOPY	.6107	3.9	21
412	17	MED	HISTORY OF MALIGNANCY WITH ENDOSCOPY	.3412	1.9	6
413	17	MED	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE>69 +/OR C.C	1.0497	6.9	24
414	17	MED	OTHR MYELOPROLIF DISORD OR POORLY DIFF NEOPL DX AGE<70 W/O C.C.	.9109	5.4	22
415	18	SURG	O.R. PROCEDURE FOR INFECTIOUS + PARASITIC DISEASES	3.2501	14.4	31
416	18	MED	SEPTICEMIA AGE >17	1.6163	8.4	25
417	18	MED	SEPTICEMIA AGE 0-17	1.2536	5.9	23
418	18	MED	POSTOPERATIVE + POST-TRAUMATIC INFECTIONS	1.0054	7.5	25
419	18	MED	FEVER OF UNKNOWN ORIGIN AGE >69 AND/OR C.C.	.9341	6.1	23
420	18	MED	FEVER OF UNKNOWN ORIGIN AGE 18-69 W/O C.C.	.5491	5.6	23

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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

DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
421	18	MED	VIRAL ILLNESS AGE >17	.5687	4.6	16
422	18	MED	VIRAL ILLNESS + FEVER OF UNKNOWN ORIGIN AGE 0-17	.6645	3.6	16
423	18	MED	OTHER INFECTIOUS + PARASITIC DISEASES DIAGNOSES	1.2972	7.9	25
424	19	SURG	O.R. PROCEDURES WITH PRINCIPAL DIAGNOSIS OF MENTAL ILLNESS	2.2040	14.6	32
425	19	MED	ACUTE ADJUST REACT + DISTURBANCES OF PSYCHOSOCIAL DYSFUNCTION	.6115	4.6	22
426	19	MED	DEPRESSIVE NEUROSES	.8417	7.2	25
427	19	MED	NEUROSES EXCEPT DEPRESSIVE	.7170	6.5	24
428	19	MED	DISORDERS OF PERSONALITY + IMPULSE CONTROL	.9618	7.6	25
429	19	MED	ORGANIC DISTURBANCES + MENTAL RETARDATION	.8435	7.6	25
430	19	MED	PSYCHOSES	1.0372	10.6	28
431	19	MED	CHILDHOOD MENTAL DISORDERS	.8385	6.8	24
432	19	MED	OTHER DIAGNOSES OF MENTAL DISORDERS	.6970	4.8	22
433	20		SUBSTANCE USE AND INDUCED ORGANIC MENTAL DISORDERS, LEFT AMA	.3652	2.9	16
434	20		SUBSTANCE ABUSE,INTOX. OR INDUCED MENTAL SYNDROME EXC DEPENDENCE	.7150	5.4	22
435	20		SUBSTANCE DEPENDENCE, DETOX. AND/OR OTHER SYMPTOMATIC TREATMENT	.8076	6.8	24
436	20		SUBSTANCE DEPENDENCE WITH REHABILITATION THERAPY	1.0181	10.1	27
437	20		SUBSTANCE DEPENDENCE, COMBINED REHABILITATION AND DETOX. THERAPY	1.3339	14.6	32
438			NO LONGER VALID	.0000		
439	21	SURG	SKIN GRAFTS FOR INJURIES	1.7246	8.7	26
440	21	SURG	WOUND DEBRIDEMENTS FOR INJURIES	1.4956	9.0	26
441	21	SURG	HAND PROCEDURES FOR INJURIES	.7408	2.7	16
442	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES AGE >69 AND/OR C.C.	1.7966	6.0	23
443	21	SURG	OTHER O.R. PROCEDURES FOR INJURIES AGE <70 W/O C.C.	1.4927	5.5	23
444	21	MED	MULTIPLE TRAUMA AGE >69 AND/OR C.C.	.7118	5.3	22
445	21	MED	MULTIPLE TRAUMA AGE 18-69 W/O C.C.	.5983	4.0	21
446	21	MED	* MULTIPLE TRAUMA AGE 0-17	.4796	2.4	10
447	21	MED	ALLERGIC REACTIONS AGE >17	.4444	2.9	13
448	21	MED	* ALLERGIC REACTIONS AGE 0-17	.3469	2.9	9
449	21	MED	POISONING AND TOXIC EFFECTS OF DRUGS AGE >69 AND/OR C.C.	.6968	4.7	22
450	21	MED	POISONING AND TOXIC EFFECTS OF DRUGS AGE 18-69 W/O C.C.	.5452	3.3	18
451	21	MED	* POISONING AND TOXIC EFFECTS OF DRUGS AGE 0-17	.2862	2.1	8
452	21	MED	COMPLICATIONS OF TREATMENT AGE >69 AND/OR C.C.	.8044	4.6	22
453	21	MED	COMPLICATIONS OF TREATMENT AGE <70 W/O C.C.	.7472	4.2	21
454	21	MED	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE >69 AND/OR C.C.	.8121	4.6	22
455	21	MED	OTHER INJURIES, POISONINGS + TOXIC EFF DIAG AGE <70 W/O C.C.	.5922	3.5	21

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TABLE 5

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DRG	MDC		TITLE	RELATIVE WEIGHTS	GEOMETRIC MEAN LOS	OUTLIER THRESHOLD
456	22		BURNS, TRANSFERRED TO ANOTHER ACUTE CARE FACILITY	1.6998	5.5	23
457	22		EXTENSIVE BURNS	7.0781	8.5	26
458	22	SURG	NON-EXTENSIVE BURNS WITH SKIN GRAFTS	3.6938	18.7	36
459	22	SURG	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT + OTHER O.R. PROC	3.1498	13.7	31
460	22	MED	NON-EXTENSIVE BURNS W/O O.R. PROCEDURE	1.1651	7.5	25
461	23	SURG	O.R. PROC WITH DIAGNOSES OF OTHER CONTACT WITH HEALTH SERVICES	1.3863	5.1	22
462	23	MED	REHABILITATION	2.1050	17.5	35
463	23	MED	SIGNS + SYMPTOMS WITH C.C.	.7971	5.9	23
464	23	MED	SIGNS + SYMPTOMS W/O C.C.	.7052	5.0	22
465	23	MED	AFTERCARE WITH HISTORY OF MALIGNANCY AS SECONDARY DX	.2889	1.7	5
466	23	MED	AFTERCARE W/O HISTORY OF MALIGNANCY AS SECONDARY DX	.4135	2.7	15
467	23	MED	OTHER FACTORS INFLUENCING HEALTH STATUS	.6242	3.4	20
468			UNRELATED OR PROCEDURE	2.4340	11.5	29
469			***PDX INVALID AS DISCHARGE DIAGNOSIS	.0000	.0	0
470			***UNGROUPABLE	.0000	.0	0
471	8	SURG	BILATERAL OR MULTIPLE MAJOR JOINT PROCEDURES OF THE LOWER EXTREMI	3.9028	20.9	38

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TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
A. DRG LOGIC ISSUES	
1. In MDC 5 (Diseases and Disorders of the Circulatory System), GROUPER assigns a patient who has had a toe or upper limb amputation to DRG 114 (Upper Limb and Toe Amputation for Circ. Sys. Disorders) - weight 2.0848. If this same patient also has a leg amputated during the same hospital episode, the patient is still assigned to DRG 114, rather than to DRG 113(Amputations for Circ. Sys. Disorders Except Upper Limb and Toe) weight 2.6522.	Assign a patient to DRG 114 if only a toe or upper limb has been amputated. If the patient also had a leg amputation or any amputation for circulatory disorders other than a toe or upper limb, the assignment is DRG 113.
2. In MDC 9 (Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast), GROUPER assigns a patient who does not have a principal diagnosis of malignancy and who has had an open breast biopsy to DRG 262 (Breast Biopsy and Local Excision for Non-malignancy) - weight .4569. If the patient also has, for example, a unilateral simple mastectomy during the same hospital episode, the patient is still assigned to DRG 262 rather than DRG 261 (Breast Proc. for Non-malignancy Except Biopsy and Loc. Excision) - weight .7253.	Change the initial search from "Principal Diagnosis of Malignancy" to "Any Diagnosis of Malignancy" and assign those patients who do not have any diagnosis of a breast malignancy and who have a biopsy and local excision only to DRG 262. If the patient also has a breast procedure for nonmalignancy other than a biopsy or local excision, the assignment is DRG 261.
3. Most of the congenital anomaly diagnosis codes are included in the MDC associated with the organ system affected. There are, however, four congenital anomaly codes in MDC 15 (Newborns and Neonates with Conditions Originating in the Perinatal Period) that would be more appropriately included in another MDC as they are not solely used as newborn or neonate diagnoses.	Move diagnosis code 7583 (Autosmal Deletion Snyd.) to MDC 19 (Mental Diseases and Disorders); DRG 429 (Organic Disturbances and Mental Retardation). Move diagnosis code 7584 (Balance Autosom. Transloc.) and diagnosis code 7585 (Autosomal Anomolies NEC) to MDC 23 (Factors Influencing Health Status and Other Contacts With Health Services); DRG 467 (Other Factors Influencing Health Status). Move diagnosis code 7586 (Gonadal Dsygenesis) to MDC 12 (Diseases and Disorders of the Male Reproductive System); DRG 352 (Other Male Reproductive System Diagnoses); and MDC 13 (Diseases and Disorders of the Female Reproduction System); DRG 369 (Other Female Reproductive System Procedures). The MDC assignment is dependent on the sex of the patient.
4. MDC 17 (Myeloproliferative Diseases and Disorders, Poorly Differentiated Neoplasms) differs from all other MDCs with a surgical hierarchy because patients cannot be assigned to DRG 468 (Unrelated O.R. Procedure). That is, patients who had selected O.R. procedures are assigned to certain DRGs and patients who had an O.R. procedure not in the selected list are assigned to the medical DRGs (403-405, 409-414) and not to DRG 468.	Assign patients who have any surgical procedure, other than those listed as major procedures (DRGs 400, 406, and 407), in MDC 17 to DRGs 401, 402, and 408, rather than to the medical DRGs.

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
5. DRG 243 (Medical Back Problems) includes diagnosis codes for all type of back pain except code 7241 (Pain in Thoracic Spine), which is assigned to DRG 247 (Signs and Symptoms of Musculoskeletal System and Connective Tissues).	Add diagnosis code 7241 to DRG 243 and remove it from DRG 247.
6. DRG 108 and DRG 109 include cardiothoracic procedures. The distinction is that procedures in DRG 108 (Cardiothoracic Proc., Except Valve and Coronary Bypass, with Pump) are performed with a heart pump and procedures in DRG 109 (Cardiothoracic Procedures Without Pump) are performed without a heart pump. Currently, however, not all procedures in DRG 108 always require the use of a heart pump and procedures in DRG 109 are not always performed without a heart pump.	Combine the O.R. procedures in DRG 108 and DRG 109. The presence of procedure code 3961 (Extracoporeal Circulation) determines whether or not a heart pump was used. If code 3961 is present on the record, assign the patient to DRG 108; if code 3961 is not present, assign to DRG 109.
7. Procedure code 36.0 (Remove Coronary Artery Obstruction) is now used almost exclusively to code percutaneous transluminal coronary angioplasty. Code 36.0 is currently assigned to DRG 108 (Cardiothoracic Proc., Except Valve and Coronary Bypass, With Pump) - weight 4.3301, which is considered to be major cardiac surgery with heart pump. However, percutaneous transluminal coronary angioplasty is not done with heart pump.	Move procedure code 36.0 to DRG 112 (Vascular Procedures Except Major Reconstruction) - weight 2.3256 and remove it from DRG 108.
8a. Presently, diagnosis code 7746 (Fetal/Neonatal Jaundice, NOS) is on the list of complications and comorbidities (CC). It is also listed in MDC 15 (Newborns and Other Neonates With Conditions Originating in the Perinatal Period); DRG 391 (Normal Newborns) as an incidental problem.	Remove code 7746 from the list of CCs and continue to treat it as an incidental problem for DRG 391.
b. In the past, there have been problems with the assignment of patients to DRG 391 (Normal Newborns) in MDC 15.	A patient is assigned to DRG 391 if the principal diagnosis and the only secondary diagnoses are from the following list:

V300	Single liveborn-in hosp	V773	Screen-phenylketonuria
V301	Singl livebrn-before adm	605	Redun prepuce phimosis
V310	Twin, mate lb-in hosp	6869	Local skin infection NOS
V311	Twin, mate lb-before adm	6910	Diaper or napkin rash
V320	Twin, mate sb-in hosp	7624	Prolapsed cord aff nb
V321	Twin, mate sb-before adm	7625	Oth umbil cord compress
V330	Twin NOS-in hospital	7626	Umbil cord NEC aff nb
V331	Twin NOS-before admissn	7630	Breech del/extrac aff nb
V340	Oth multiple nb-in hosp	7631	Malpos/dispro NEC aff nb
V341	Oth mult nb-before adm	7632	Forceps delivery aff nb
V350	Oth multiple sb-in hosp	7633	Vacuum extrac del aff nb
V351	Oth mult sb-before adm	7636	Precipitate del aff nb
V360	Multiple nb/sb-in hosp	7639	Compl deliv NOS aff nb
V361	Mult nb/sb-before adm	7660	Exceptionally large baby

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	V370 Mult birth NOS-in hosp V371 Mult brth NOS-before adm V390 Liveborn NOS-in hosp V391 Liveborn NOS-before adm V502 Routine circumcision V703 Med exam NEC-admin purposes 7661 Heavy-for-date infan NEC 7662 Post-term infant NOS 7671 Scalp injury at birth 7686 Mild/mod birth asphyxia 7746 Fetal/neonatal jaund NOS 7788 Nb integument cond NEC Therefore, the branching criteria on the tree diagram in MDC 15 changes from "Normal Newborns Without Significant Secondary Diagnosis" to "Normal Newborns With Any Significant Diagnosis."
9. Diagnosis codes 1946 (Malig. Neopl. Paraganglia NEC), 2276 (Benign neopl. paraganglia), and 2373 (Unc. Behav. Neo. Paragang.) are in MDC 10 (Endocrine, Nutritional and Metabolic Diseases and Disorders) while other related diagnoses are in MDC 1 (Diseases and Disorders of the Nervous System).	Add diagnosis codes 1946, 2276, and 2373 to MDC 1 (DRGs 10 and 11) and remove from MDC 10.
10. Diagnosis code 9968 (Complication Transplanted Organ) is assigned to MDC 21 (Injury, Poisoning and Toxic Effects of Drugs). Since this code relates to any transplanted organ, it cannot be assigned to an organ specific MDC. Currently, codes 5051 (Ancillary Liver Transplant) and 5059 (Liver Transplant) are allowed with MDC 21 and assigned to DRG 442 and DRG 443 (Other O.R. Procedures for Injuries). Payment for these DRGs is inadequate for the procedure. All other transplant procedures associated with rejected organs are assigned to MDC 21, DRG 468.	Remove procedure codes 5051 and 5059 from MDC 21 (DRG 442 and DRG 443) and allow assignment to DRG 468.
11. Procedure code 5494 (Create Peritoneal Vascular Shunt) is a major shunt procedure, yet it is DRG 201 (Other Hepatobiliary or Pancreas O.R. Procedures) and not in DRG 191 (Major Pancreas, Liver and Shunt Procedures).	Add procedure code 5494 to DRG 191 and remove it from DRG 201.
12. Diagnosis code 4565 (Pelvic Varices) is assigned only to MDC 13 (Diseases and Disorders of the Female Reproductive System. This diagnosis code is also applicable to MDC 12 (Diseases and Disorders of the Male Reproductive System).	Add diagnosis code 4565 (Pelvic Varices) to MDC 12, DRG 352 (Other Male Reproductive System Diagnoses). Code is left as is on MDC 13.
13. Procedure code 031 (Division Intraspinal Nerve Root) is applicable to neck and back procedures and therefore should also be assigned to MDC 8 (Disease and Disorder of the Musculosketetal Sep. and Connective Ties.)	Add procedure code 031 (Division Intraspinal Nerve Root) to MDC 8, DRGS 214 and 215 (Back and Neck Procedures).

TABLE 6 – CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
14. DRG 209 (Major Joint Procedures) does not adequately distinguish multiple joint procedures from single joint procedures.	Create DRG 471 (Bilateral or Multiple Major Joint Procedures of the Lower Extremity) to include any combination of two of the following procedure codes: 8141, 8148, 8151, 8159, 8161, 8162, 8163, and 8164.
15. DRGs 434 through 438 do not adequately reflect substance dependence detoxification and rehabilitation treatment.	Revise DRGs 434 through 438 as follows: Move all diagnosis codes in DRGs 435, 437, and 438 (except diagnosis codes 2910, 2913, 2918, 2919, 2920, 30300, 30301, 30302, 30303, and 30390) to DRG 434 (Substance Abuse, Intoxication, or Induced Mental Syndrome Except Dependence). Move all diagnosis codes in DRGs 434 and 436 and diagnosis codes 2910, 2913, 2918, 2919, 2920, 30300, 30301, 30302, 30303, and 30390 to DRGs 435, 436, and 437. Diagnosis procedure code V57.89 must be present for a case to be assigned to DRG 436. Diagnosis procedure codes V57.89 and 94.25 must be present for a case to ba assigned to DRG 437. Delete DRG 438.
16. Patients with a principal diagnosis of diabetes mellitus who receive kidney transplants are assigned to DRG 468 (Unrelated O.R. Procedure) rather than DRG 302 (Kidney Transplant).	Move procedure code 5569 (Kidney transplant) to DRG 302 even if code 25040 or 25041 (Diabetes) is present.
B. OPERATING ROOM vs NON-OPERATING ROOM ASSIGNMENT 1. Procedure code 3786 (Remove Cardiac Pacemaker) is used for the removal of both a temporary pacemaker and a permanent pacemaker. Presently, this code appears on the list of operating room procedures and, when coded, results in assignment to one of the operative pacemaker DRGs. In general, the removal of a temporary pacemaker is not performed in the operating room. If a permanent pacemaker is removed, then usually a replacement pacemaker is inserted. In that case, the reinsertion is coded and the patient is assigned to the appropriate DRG. The current operating room procedures, listed below, are also considered to be procedures not generally performed in the operating room. 8623 (Removal of nail) 5499 (Abdomen region operation, NEC) 3996 (Total body perfusion) 5196 Percutaneous Extraction of common duct stones)	Remove codes 3786, 8623, 5499, 3996, and 5196 from the list of operating room procedures and from the DRGs to which they are currently assigned.
2. Procedure codes 6813 (Uterine Biopsy) and 7076 (Hymenorrhaphy) are generally performed in an operating room and therefore should be assigned to the list of O.R. procedures.	Add procedure codes 6813 (Uterine biopsy) and 7076 (Hymenorrhaphy) to the list of O.R. procedures and to MDC 13, DRG 360 (Vagina, cervix and vulva procedures).

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
C. COMPLICATION AND COMORBIDITY MEMBERSHIP A number of diagnostic and procedural codes (mostly amputation codes) should be added to the list of complications and comorbidities.	Add the following diagnosis codes to the list of complications and comorbidities: 25090 Diab w compl NOS adult 25091 Diab w compl NOS juven 87272 Open wnd ossicles-comp 87273 Open wnd eustach tb-comp 87274 Open wound cochlea-comp 87333 Open wnd nas sinus-compl 8743 Open wound thyroid-compl 8745 Open wound pharynx-compl 8870 Amput below elb, unilat 8871 Amp below elb, unil-comp 8872 Amput abv elbow, unilat 8873 Amput abv elb, unil-comp 8874 Amputat arm, unilat NOS 8875 Amput arm, unil NOS-comp 8876 Amputation arm, bilat 8877 Amputat arm, bilat-compl 8960 Amputation foot, unilat 8961 Amput foot, unilat-compl 8962 Amput foot, bilat 8963 Amputat foot, bilat-comp 8970 Amput below knee, unilat 8971 Amputat bk, unilat-compl 8972 Amput above knee, unilat 8973 Amput abv kn, unil-compl 8974 Amputat leg, unilat NOS 8975 Amput leg, unil NOS-comp 8976 Amputation leg, bilat 8977 Amputat leg, bilat-compl
D. SURGICAL HIERARCHY AND WEIGHT ISSUES 1. When a cataract operation is performed, the patient is assigned to DRG 39 (Lens Procedure) - weight .4958. If a vitrectomy or anterior chamber injection or evacuation is performed during the cataract operation, and coded accordingly, the patient is assigned to DRG 42 (Intraocular Procedures Except Retina, Iris and Lens) - weight .5845. This is because vitrectomies and anterior chamber procedures are higher than lens procedures in the surgical hierarchy. However, the process of removing a small amount of vitreous or an injection or evacuation from the anterior chamber during a cataract operation is incidental to the lens extraction and the DRG assignment, therefore, should be for the lens extraction, not for the higher weighted vitrectomy or anterior chamber.	If a lens procedure only or a lens procedure and one of the following procedures is performed, assign DRG 39. 1291 Therapeut Evac Ant Chamber) 1292 Anterior Chamber Inject. 1471 Anterior Removal Vitreous 1472 Vitreous Removal NEC 1473 Anterior Mechan Vitrect. 1474 Mechan Vitrectomy 1475 Vitreous Substitut Inject. 1479 Vitreous Operation NEC If any of the procedures listed above are performed without a lens procedure, assign DRG 42.

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
2. There has been concern regarding the DRG surgical hierarchy in MDC 6 (Diseases and Disorders of the Digestive System). The position of Peritoneal Adhesiolysis, DRG 150-151, in relation to Minor Small and Large Bowel Procedures, DRG 152-153, and Hernia Procedures, DRG 159-163 is of particular concern. Analysis of HCFA average LOS and average charge data for the surgical DRGs in MDC 6 supports modification of the surgical hierarchy for MDC 6.	Change MDC 6 surgical hierarchy as follows: MDC 6-Diseases and Disorders of the Digestive System DRG 146-147 Rectal Resection DRG 148-149 Major Small and Large Bowel Procedures DRG 154-156 Stomach, Esophageal and Duodenal Procedures DRG 150-151 Peritoneal Adhesiolysis DRG 152-153 Minor Small and Large Bowel Procedures DRG 164-167 Appendectomy DRG 159-163 Hernia Procedures DRG 157-158 Anal Procedures DRG 168-169 Procedures in the Mouth DRG 170-171 Other Digestive System O.R. Procedures
E. DRG 468 Patients are assigned to DRG 468 (Unrelated O.R. Procedure) when all the operating room procedures are unrelated to the MDC of the patients' principal diagnosis. There appears to be a need to update certain DRGs by including O.R. procedures that could possibly be performed for diagnoses within the MDC, so patients would no longer be assigned to DRG 468.	Add the following list of O.R. procedures, listed by MDC, to the DRG specified: MDC 01 - Diseases and Disorders of the Nervous System DRG 4 (Spinal procedures) 7781 Oth chest cage ostectomy 7791 Tot chest cage ostectomy DRG 5 (Extracranial vascular procedures) 3832 Head/neck ves resec-anas 3929 Vasc shunt and bypass NEC 3930 Suture of vessel NOS 3931 Suture of artery 3932 Suture of vein 3956 Repair vess w tis patch 3957 Rep vess w synth patch 3958 Repair vess w patch NOS 3959 Repair of vessel NEC 398 Vascular body operations 3992 Vein inject-scleros agnt DRGs 7 and 8 (Peripheral and cranial nerve and other nervous sys. procs.)

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	0719 Endocrine dx proc NEC
	0780 Thymectomy NOS
	0781 Part excision of thymus
	0782 Total excision of thymus
	0851 Canthotomy
	0852 Blepharorrhaphy
	0859 Adjust lid position NEC
	8131 Foot arthroplas w prosth
	8139 Foot/toe arthroplast NEC
	8171 Hand arthroplas w prosth
	8179 Hand arthroplasty NEC
	8186 Carpal arthropl-syn pros
	8187 Wrist arthroplasty NEC
	8313 Other tenotomy
	8314 Fasciotomy
	8319 Soft tissue division NEC
	8321 Soft tissue biopsy
	8341 Tendon excision for grft
	8343 Musc/fasc excis for grft
	8345 Other myectomy
	8349 Other soft tissue excis
	8681 Repair facial weakness
	MDC 02 - Diseases and Disorders of the Eye
	DRG 37 (Orbital procedures)
	7679 Open reduct face fx NEC
	7691 Bone graft to face bone
	7692 Syn implant to face bone
	7646 Facial bone reconstr NEC
	DRG 38 (Primary iris procedures)
	1273 Cyclophotocoagulation
	DRG 39 (Lens Procedures)
	1301 Removal of foreign body from lens with magnet
	DRGs 40 and DRG 41 (Extraocular procedures except orbit)
	864 Radical excis skin les
	MDC 03 - Diseases and Disorders of the Ear, Nose and Throat
	DRG 55 (Miscellaneous ear, nose and throat procs.)
	0609 Incis thyroid field NEC
	0912 Lacrimal sac biopsy
	0919 Lacrimal sys dx proc NEC
	0981 Dacryocystorhinostomy
	0999 Lacrimal system op NEC
	DRG 63 (Other ear, nose and throat O.R. procs.)
	0474 Periph nerv anastom NEC
	0475 Postop revis per nerv op

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	0476 Late repair per nerve inj
	1652 Orbit exent w bone remov
	1665 Zndry exent cavity graft
	1666 Revis exenter cavity NEC
	1698 Operation on orbit NEC
	7779 Excise bone for gft NEC
	MDC 04 - Diseases and Disorders of the Respiratory System
	DRGs 76 and 77 (O.R. proc. on the resp. sys. except major chest with O.R.)
	5012 Liver biopsy NEC
	8321 Soft tissue biopsy
	MDC 05 - Diseases and Disorders of the Circulatory System
	DRG 120 (Other O.R. procedures)
	251 Destruction tongue les
	863 Other local destruc skin
	5591 Renal decapsulation
	MDC 06 - Diseases and Disorders of the Digestive System
	DRGs 152 and 153 (Minor small and large bowel procs.)
	5684 Close ureter fistula NEC
	5783 Repair rectovesical fistula
	6942 Closure uterine fistula
	7075 Repair vag fistula NEC
	7172 Repair vulvar fistula
	DRGs 154, 155, and 156 (Stomach, esophageal and duodenal procs.)
	3173 Trachea fistula clos NEC
	3805 Thoracic vessel resect/anast
	3835 Thor vessel resec/anast
	3845 Thor ves resect w replac
	3865 Thoracic vessel excision
	3885 Occlude thoracic ves NEC
	5183 Pancreat sphincteroplas
	527 Rad pancreaticoduodenect
	DRGs 168 and 169 (Procedures on the mouth)
	293 Ex. or destr. of lesion or tissue of pharynx
	DRGs 170 and 171 (Other digestive procedures)
	3804 Incision of aorta
	3949 Vasc. proc revision NEC
	3991 Freeing of vessel
	MDC 08 - Diseases and Disorders of the Musculoskeletal Sys. and Connective Tiss.
	DRG 217 (Wound debridement and skin graft exc. hand)
	8665 Heterograft to skin
	8666 Hemograft to skin
	8671 Cut. prep. ped graft
	8672 Pedicle graft advancement
	DRGs 233 and 234 (Other musculoskel. sys. and connect. tiss. O.R. procs.)
	1651 Radical orbitomaxillect

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	1659 Orbital exenteration NEC
	2172 Open reduction nasal fx
	2262 Exc max sinus lesion NEC
	3481 Excise diaphragm lesion
	4051 Rad dissec axillary node
	4052 Rad dissec periaort node
	4053 Rad dissect illac nodes
	4054 Radical groin dissection
	4059 Rad node dissection NEC
	5900 Retroperit dissect NOS
	6241 Remove both testes
	DRGs 226 and 227 (Soft tissue procedures)
	8681 Repair facial weakness
	MDC 09 - Diseases and Disorders of the Skin, Subcutaneous Tissue & Breast
	DRG 268 (Skin, subcutaneous tissue and breast plastic procs.)
	0838 Correct lid retraction
	2755 Full-thick grft to mouth
	2756 Skin graft to mouth NEC
	2769 Oth plastic repair palat
	8289 Hand plastic op NEC
	DRGs 269 and 270 (Other skin, subcutaneous tissue and breast O.R. procs.)
	0609 Incis thyroid field NEC
	0722 Unitateral adrenalectomy
	073 Bilateral adrenalectomy
	0763 Part excis pituitary NOS
	0764 Tot exc pituit-transfron
	0765 Tot exc pituit-transsphen
	0768 Total exc pituitary NEC
	0769 Total exc pituitary NOS
	0772 Pituitary gland incision
	0779 Pituitary operation NEC
	0823 Exc major les lid, part-thick
	6561 Remove both tubes and ovar
	6711 Endocervical biopsy
	6712 Cervical biopsy NEC
	6719 Cervical dx procedur NEC
	6739 Cervical les destruc NEC
	7024 Vaginal biopsy
	7111 Vulvar biopsy
	7119 Vulvar diagnos proc NEC
	713 Local vulvar excis NEC
	MDC 10 - Endocrine, Nutritional and Metabolic Diseases and Disorders
	DRGs 292 and 293 (Other endocrine, nutritional and metabolic O.R. procs.)
	3426 Other mediastinal biopsy
	3802 Head/neck ves incis NEC

TABLE 6 - PROPOSED CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	3829 Blood vessel dx proc NEC
	3830 Vessel resect/anest NOS
	3833 Arm vessel resect/anast
	3838 Leg artery resect/anast
	3843 Arm ves resect w replace
	3848 Leg artery resec w repla
	3855 Thorac var v lig-strip
	3863 Arm vessel excision
	3868 Leg artery excision
	3883 Occlude arm vessel NEC
	3888 Occlude arm vessel NEC
	3925 Aorta-iliac-femor bypass
	3931 Suture of artery
	3941 Postop vasc op hem contr
	3949 Vasc proc revision NEC
	3956 Repair vess w tis patch
	3957 Rep vess w snyth patch
	3958 Repair vess w patch NOS
	3959 Repair of vessel NEC
	3991 Freeing of vessel
	544 Destruct peritoneal tiss
	MDC 11 - Diseases and Disorders of the Kidney and Urinary Tract
	DRG 315 (Other kidney and urinary tract O.R. procs.)
	0689 Other parathyroidectomy
	3806 Abdomen artery incision
	3807 Abdominal vein incision
	3816 Abdominal endarterectmy
	3836 Abd vessel resect/anast
	3837 Abd vein resect and anast
	3846 Abd artery resc w repla
	3847 Abd vein resect w replac
	3866 Abdominal artery excis
	3867 Abdominal vein excision
	3886 Occlude abd artery NEC
	3887 Occlude abd vein NEC
	3956 Repair vess w tis patch
	3957 Repair vess w synth patch
	3958 Repair vess w patch NOS
	3959 Repair of vessel NEC
	5493 Create cutaneoperiton fist
	8622 Wound debridement
	MDC 12 - Diseases and Disorders of the Male Reproductive System
	DRGs 334 and 335 (Major male pelvic procs.)
	4869 Rectal resection NEC
	5411 Exploratory laparotomy
	5751 Excision of urachus

TABLE 6 - PROPOSED CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	MDC 13 - Diseases and Disorders of the Female Reproductive System
	DRG 360 (Vagina, cervix and vulva-procedures)
	4873 Closure of other rect fistula
	7023 Cul-de-sac biopsy
	7029 Vagin/cul-de-sac dx NEC
	7119 Vulvar diagnos proc NEC
	DRG 365 (Other female reproductive system O.R. procs.)
	5734 Bladder biopsy NEC
	5751 Excision of urachus
	5759 Open Ex or dest oth les ortis of blad
	5902 Oth lys of periter adhes
	5919 Oth incis of perives tiss
	7012 Culdotomy
	MDC 14 - Pregnancy, Childbirth and the Puerperium
	DRG 374 (Vaginal delivery with sterilization and/or C.C.)
	6697 Bury fimbriae in uterus
	DRG 375 (Gaginal delivery with O.R. proc. except steril. and/or D.C.)
	387 Plication of vena cava
	4024 Excise inguinal node
	403 Regional lymph node exc
	5411 Exploratory laparotomy
	5421 Laparoscopy
	680 Hysterotomy
	MDC 16 - Blood, Blood Forming Organs and Immunological Diseases and Disorders
	DRG 394 (Other O.R. procs. of the blood and blood forming organs)
	400 Incis lymphatic structur
	MDC 17 - Myeloproliferative Diseases and Poorly Differentiated Neoplasms
	DRG 400 (Lymphoma or leukemia with major O.R. proc.) and
	DRGs 406 and 407 (Myeloprolif. disord. or poorly diff. neopl. with maj. O.R. With C.C.)
	3229 Destroy loc lung les NEC
	343 Destruct mediastin les
	0371 Spin subarach-peritoneal shunt
	0372 Spin subarach-ureteral shunt
	0379 Other shunt spinal theca
	410 Bone marrow transplant
	DRGs 401 and 402 (Lymphoma or leukemia with minor O.R. proc.) and
	DRG 408 (Myeloprolif. disord. or poorly diff. neopl. with minor O.R. proc.)
	3421 Transpleura thoracoscopy
	4415 Gastric biopsy NEC
	4515 Small bowel biopsy NEC
	4526 Large bowel biopsy NEC
	5733 Transureth bladd biopsy
	8321 Soft tissue biopsy
	8339 Exc les soft tissue NEC

TABLE 6 - PROPOSED CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	MDC 21 - Injury, Poisoning and Toxic Effects of Drugs
	DRGs 442 and 443 (Other O.R. procedures for injuries)
	0141 Thalamus operations
	0201 Linear craniectomy
	0444 Tarsal tunnel release
	0780 Thymectomy NOS
	0781 Part excision of thymus
	0782 Total excision of thymus
	0791 Thymus field exploration
	0792 Incision of thymus
	0793 Repair of thymus
	100 Remov embed FB conjunct w incis
	110 Magnet remov embed FB cornea
	111 Corneal incision
	1200 Remov. intraoc FY anter seg eye NOS
	1372 Secondary insert lens
	138 Implanted lens removal
	139 Other operations on lens
	1839 Excis external ear NEC
	214 Resection of nose
	2169 Turbinectomy NEC
	245 Alveoloplasty
	2792 Mouth incision NOS
	2799 Oral cavity ops NEC
	287 Hemorr contrl post T and A
	2891 Incis to remov tonsil FB
	290 Pharyngotomy
	294 Plastic op on pharynx
	2953 Closure pharynx fistula NEC
	2959 Pharyngeal repair NEC
	2999 Pharyngeal operation NEC
	301 Hemilaryngectomy
	3021 Epiglottidectomy
	3022 Vocal cordectomy
	3029 Other part laryngectomy
	303 Complete laryngectomy
	3173 Trachea fistula clos NEC
	3199 Other tracheal operation
	321 Other bronchial excision
	330 Incision of bronchus
	331 Incision of lung
	3392 Bronchial ligation
	3398 Bronchial operation NEC
	3399 Lung operation NEC
	341 Incision of mediastinum
	3421 Transpleura thoracoscopy
	3489 Diaphragm operation NEC

TABLE 6 - CHANGES TO GROUPER PROGRAM

PROBLEM	PROPOSED GROUPER MODIFICATION
	3499 Thoracic operation NEC 3711 Cardiotomy 3949 Vasc proc revision NEC 537 Abd repair-diaphr hernia 5380 Thor rep-diaph hern NOS 5381 Diaphragmatic plication 5382 Parastern hernia repair 5553 Rejected kidney nephrect 5554 Bilateral nephrectomy 576 Partial cystectomy 5779 Total cystectomy NEC
F. DOCUMENTATION ISSUES Some of the language in the DRG documentation is not completely descriptive of the classification of cases.	Make the following changes to the DRG documentation: * Update MDC tree diagrams to reflect the surgical hierarchy of each MDC. The tree diagrams have each surgical group ordered from left to right in hierarchical order. Since DRG numbers are not changed, the trees no longer increase in numerical order from left to right. * In the medical partitioning section of MDC 5 (Diseases and Disorders of the Circulatory System), change the labels on pp. 187-189 to better define the list of "Cardiovascular Complications" and "Complex Cardiovascular Diagnoses." * Remove procedure codes 431 (Temporary Gastrostomy) and 7022 (Culdoscopy) from the list of operating room procedures in MDC 3 and MDC 14, respectively. These codes do not appear in Appendix B (Operating Room Procedures) and are not considered by GROUPER to be operating procedures. * The title of the branching criteria in the tree diagram for DRG 115 (Permanent Cardiac Pacemaker Implant with AMI or CHF) is changed from "Principal Diagnoses of AMI or CHF" to "Principal Diagnoses of AMI, Heart Failure or Shock." * The title of the branching criteria in the tree diagram for DRGs 164 and 165 (Appendectomy With a Complicated Principal Diagnoses) is changed from "Complicated Diagnosis" to "Complicated Principal Diagnosis." * The title of the branching criteria in the tree diagram for DRG 303 (Kidney, Ureter and Major Bladder Proc. for Neoplasm) is changed from "Principal Diagnosis of Malignancy" to "Principal Diagnois of Neoplasm. These changes are editorial in nature and do not affect in any way the classification of cases.

Appendix A—Regulatory Impact Analysis

A. Introduction

Executive Order 12291 requires us to prepare and publish a regulatory impact analysis for any regulations that are likely to result in: (1) An annual effect on the economy of $100 million or more, (2) a major increase in costs or prices for consumers, individual industries, government agencies, or geographic regions, or (3) significant adverse effects 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.

Several provisions proposed in this document would exceed the $100 million threshold under E.O. 12291. Therefore, we are including an impact analysis that contains a discussion of each significant proposed change. In our summary, we discuss the expected net effects resulting from these changes.

Consistent with the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 through 612), we prepare and publish an initial regulatory flexibility analysis for proposed regulations unless the Secretary certifies that the regulations would not have a significant economic impact on a substantial number of small entities.

Under the RFA, we treat all hospitals as small entities. It is clear that these proposed changes would affect a substantial number of hospitals and the effects on some would be significant. Therefore, we are providing an initial regulatory flexibility analysis.

The discussion below, in combination with the rest of this preamble, constitutes a combined regulatory impact analysis and regulatory flexibility analysis meeting the requirements of E.O. 12291 and the RFA.

B. Objectives

We expect these proposed changes to further our original objectives in implementing the prospective payment system, which include:

- Restructuring hospitals economic incentives;
- Basing payment on a system that identifies the product being purchased more accurately than cost reimbursement;
- Reinforcing the role of the Federal Government as a prudent buyer of services; and
- Restraining the rate of hospital cost increase, thus moderating the outflow of expenditures from the Medicare trust fund.

In addition, we recognize national goals of deficit reduction and restraints on government spending, in general. We believe these proposals will further our goals while maintaining the financial viability of the hospital industry, and assuring access to high quality care for beneficiaries.

We expect these proposed changes to further those objectives while avoiding or minimizing unintended adverse consequences and ensuring that outcomes of this payment system, in general, are reasonable and equitable. Thus, the intent is to refine further the prospective payment system without undercutting our objectives.

C. Problems of Impact Quantification and Attributing Causality

In previously published interim and final rules, we discussed the objectives and impacts of the rules largely in general conceptual terms. We did not always have adequate data, analytic resources, or time to perform a detailed quantitative impact analysis of particular provisions for publication with these previous rules. However, we did solicit comments and information that would enable us to describe and quantify better the anticipated effects of the Medicare prospective payments system.

At present, we still have no adequate way to model potential behavioral changes on the part of hospitals, hospital managers and employees, physicians, suppliers, or beneficiaries. Much of the available Medicare program data reflect only patterns and trends of utilization and payment under cost reimbursement. Where it is feasible and appropriate, we have used this data to model and analyze the effects of particular proposals. Nonetheless, any of the quantitative estimates given below should be received with a qualified recognition of the limitations of the data on which they are based.

We continue to study many aspects of the prospective payment system with the intent of obtaining more adequate data for the purpose of better quantifying the effects of and behavioral changes caused by the payment system. Examples of these initiatives include various reports to Congress, as required by section 603 of Pub. L. 98-21. These studies will examine many issues, including the feasibility and impact of eliminating or phasing out separate urban and rural DRG prospective payment rates and the feasibility and desirability of applying the payment methodology to payment by all payors for inpatient hospital services. We are also required, under section 603(a)(2)(A) of Pub. L. 98-21, to study and report annually to the Congress on the impact of the prospective payment system.

In addition to these initiatives, we and others are undertaking a variety of external studies on the effects of the prospective payment system. One recent external study examined the relationship of severity-of-illness and operating cost differences, and payment inequities, among hospitals. We also are examining selected aspects of hospital management behavior under the prospective payment system, to be able to predict better certain effects and outcomes from the system.

As these studies and reports are completed, and especially as we receive a greater amount of audited cost report data for prospective payment cost reporting periods, we should be able to analyze the dynamics of the prospective payment system better. In turn, the data and information should contribute to establishing an adequate data base to model potential behavioral changes on the part of hospitals, hospital employees, physicians, suppliers and beneficiaries.

A second problem that limits our ability to quantify the effects of this proposed rule is attributing the causation of particular changes in the hospital industry directly to particular proposed regulation provisions. This is made particularly difficult by the changing nature of the health care sector. The prospective payment system is but one of numerous efforts aimed at controlling rapidly rising health care costs. In many cases, then, it may be difficult to determine the extent that the prospective payment system, or some other initiative, caused the result, or whether two (or more) initiatives caused the result interactively.

Apart from the more easily identifiable initiatives that are affecting the health care market, especially on the demand side, changes also have been occurring on the supply side. Most notable of these changes is the increase in the supply of physicians, which enhances the competition for patients among providers. There has also been a significant growth of facilities furnishing out-of-hospital treatment. For example, since 1973, two thousand ambulatory care clinics have opened. We have also certified 265 ambulatory surgicenters, with another hundred awaiting certification. In addition, home health services are the fastest growing component of the Medicare program.

The multiple changes in the health care system require the use of caution in attributing positive or adverse effects to one or another initiative or policy change. However, we can point to the

fact that prospective payment has the advantage of being implemented on a precise schedule, applying to a readily identifiable group of beneficiaries, and at different times for different provisions. Furthermore, the incentives provided by prospective payment are readily identifiable. Thus, to the extent feasible, and as our data resources permit, it is possible to attribute some of the effects resulting from this payment system to the system itself and to proposed changes to its structure.

In view of the problems we have experienced in quantifying impacts and attributing causality, we believe that the approach we are taking in the specific impact discussions below is the best feasible. In some cases we have included quantitative estimates of program savings. However, since it is not possible to develop a reliable quantitative analysis and comparison of the costs and benefits of all the provisions to the various affected parties, we have primarily focused on explaining the kinds of interactions, and the decisions, which those parties will have to consider. As with previous impact analyses, we are soliciting comments and information about the anticipated effects of these proposed changes to the prospective payment system.

D. Hospitals Included in and Excluded From the Prospective Payment System

Since October 1983, hospitals operating under prospective payment have been phasing-in to the system according to their own accounting year starting dates. As of September 1984, 5,045 hospitals (81 percent of all hospitals) were operating under the prospective payment system. This represents virtually 100 percent of all hospitals currently subject to the new payment system. As of March 1985, more than 1,200 hospitals were excluded from the prospective payment system and continue to be paid on the basis of reasonable cost reimbursement. Examples of these hospitals include short-stay hospitals in waiver States, long-term care hospitals, and children's hospitals. Another 1,246 psychiatric rehabilitation and alcohol/drug units of hospitals included in the prospective payment system, are excluded from prospective payment as of the same date.

More than four hundred hospitals were being paid on a special basis under the prospective payment system. They included hospitals accorded special treatment under our regulations at 42 CFR Part 412, Subpart G, such as sole community hospitals and cancer treatment and research hospitals. Also included in this group receiving payment on a special basis are referral centers and hospitals that previously allowed extensive direct billing under Part B.

E. DRG Classification and Weights

1. Recalibration

We are proposing to make certain changes in the DRG classification system and to recalibrate the DRG weights based on 1984 PATBILL charge data. The changes we are proposing are discussed in detail in section II of the preamble.

The advantages of using newer and more complete data from the PATBILL file outweigh both the potential disadvantages of using charges, and the advantages of using currently available cost report data. Charges appear to be a valid measure of relative resource use, at least on the basis of historical data, the existing DRG classifications, and the current methodology for deriving DRG weights. Use of 1984 charge information would also explicitly incorporate the effects of changes in hospital behavior, whereas the 1981 cost data would not.

Since its implementation in October 1983, the prospective payment system has used DRG relative weights calculated by a complex methodology using data from the 1981 MEDPAR file, a 1981 Medicare Cost Report abstract file, and a 1981 hospital wage index based on hospital wage information collected by BLS. These cost-based relative weights were used in the Medicare prospective payment system on the assumption that they would better reflect differences in true resource costs among DRGs than would relative weights derived from charges. However, as discussed in section II of the preamble, charge data have some potential advantages compared to operating cost data. Weights based on charges could be constructed without cost report data, which is typically two to three years old before it becomes available for analysis. Charge-based relative weights are also simpler to compute, since complex adjustments are not required to convert charges to costs and to remove capital and medical education costs. Because of these potential advantages of charge-based weights, we initiated a study to determine whether it would be feasible to recalibrate the DRG relative weights on the basis of charges rather than costs.*

Using the 1981 data upon which the prospective payment system was based, this study investigated the extent to which relative weights based on costs differ from relative weights derived exclusively from charge data. The study also assessed the validity of a case-mix index developed from charge-based relative weights as a measure of the relative costliness of a hospital's Medicare cases. The main findings of the analysis indicate that charge-based and operating cost relative weights, based on 1981 MEDPAR data, are very similar, as follows:

- The difference between relative weights based on operating costs and relative weights based on total charges is less than five percent for most of the DRGs.
- The structure of the relative weights across DRGs for each method are also very similar. The Spearman and Pearson correlation coefficients are greater than .99.
- The relative dispersion of costs or charges within a DRG are also very similar, although for most DRGs the coefficients of variation are slightly higher using charge data than the coefficients of variation using cost data.
- The dispersion of average costs or charges across DRGs are also very similar. However, DRGs with high (low) relative weights tend to have slightly higher (lower) relative weights if computed using charge data rather than cost data.
- Large, urban hospitals and teaching hospitals tend to have slightly higher case-mix index values using charge-based weights rather than cost-based weights, whereas small, rural hospitals and nonteaching hospitals tend to have slightly lower case-mix index values using charge-based weights.

The results of the analysis support the use of charge data in constructing DRG relative weights. We believe that differences among hospitals in cost-to-charge ratios do not result in large, arbitrary differences between charge-based and operating cost weights, but we seek comments on this issue.

Whether the data are standardized for differences in capital and medical education costs also appears to make little difference. These inter-hospital differences would only affect the DRG relative weights if there were a high degree of specialization among hospitals in different groups of DRGs they treat. Our results indicate that, in 1981, hospitals' case mixes were similar enough that most inter-hospital effects disappear when the data are partitioned by DRG.

*Philip Cotterill, Joel Bobula, and Rose Connerton, "A Comparison of Alternative DRG Relative Weights for the Medicare Prospective Payment System," HCFA internal working paper, February 1985.

In addition, we analyzed the relationship between hospitals' case-mix index values constructed from the charge-based relative weights and average Medicare cost per case based on multivariate regression analysis of hospitals' 1981 operating costs per case. The charge-based case-mix index was found to be approximately proportional to the expected costliness of an individual hospital's Medicare patient mix. This result further supports the study's major finding that there do not appear to be large differences between charge-based and cost-based weights, or between case-mix indexes constructed from charge-based or cost-based weights.

2. Proposed New Weight Values

Table 5 in section IV of the Addendum to this proposed rule sets forth the proposed recalibrated DRG weights. This table reflects all the reclassifications and GROUPER changes discussed in section II of the preamble. The proposed DRG weights are highly correlated with the published FY 1985 DRG weights. The Pearson correlation coefficient for the two sets of relative weights is 95.

The changes in values for particular DRGs are affected by a number of factors other than the use of charge data. In fact, we believe that the use of charge data accounts for a smaller portion of the change in weights than some of the other factors. The changes are accounted for largely by GROUPER changes and behavioral changes that are reflected in the more recent data base.

Approximately 82 percent of FY 1984 discharges fall into DRGs for which the proposed weights would differ from the current FY 1985 weights by less than 15 percent. Nonetheless, 128 DRGs have proposed weights that would differ from their current weights by 15 percent or more. Of these, 61 would increase and 67 decrease. Only about 4 percent of all FY 1984 discharges occured in DRGs with weights that would decrease more than 15 percent, whereas about 10 percent occurred in DRGs with more than a 15 percent increase.

Many of the DRGs that show weight changes of more than 15 percent have relatively low Medicare case frequencies. Thirty-nine of the DRGs that would go up more than 15 percent are DRGs for which non/Medicare data was used to calculate their previous weights. These 39 DRGs account for only about 2.5 percent of the cases that fall into the 61 DRGs that would increase by more than 15 percent. More than half of the cases in the 61 high-increase DRGs are in only 2 DRGs: DRG 39 (lens procedures) would increase 16.4 percent and DRG 468 (unrelated OR procedure) would increase 16.9 percent. Nonetheless, only 3 of the 25 most common DRGs (including DRGs 39 and 468) would increase by 10 percent or more.

Each hospital will have to assess the effect of the proposed DRG weights for itself. As noted elsewhere, the general tendency of the recalibration is to decompress both charge weights and case mix indexes, so that the higher ones are on the average, a little higher, and the lower ones are, on the average a little lower. However, the degree to which this may occur will vary from case to case. Further, changes in the DRG weights would interact with changes in Federal rates, wage indexes, and the blending of Federal and hospital-specific portions. (See additional discussion in section I below.)

3. Alcohol and Drug-Related DRG Reclassificaiton

As of March 1985, 28 hospitals and 28 units that furnish alcohol and drug services have been excluded from the propsective payment system under §§ 412.23 and 412.32 of our regulations. Exclusion was afforded these hospitals and units on a temporary basis because of difficulties assoctated with implementation of DRGs for the major diagnostic category (MDC) related to alcohol and drug-related services. We are proposing to reclassify these DRGs to better reflect the patterns of practice in alcohol and drug detoxification and rehabilitation services. As a result, these hospitals and units would no longer be excluded from the prospective payment system effective with cost reporting periods beginning on or after October 1, 1985.

We are proposing to replace the six DRGs in the previous classification for this MDC with five DRGs. The proposed weights for DRGs 436 and 437 (rehabilitation therapy and combined detoxification and rehabilitation treatment) are higher than the weights for treatment without rehabilitation. However, there are many more cases in the DRGs for treatment without rehabilitation (DRGs 433 to 435). As a result, the average weight for the cases in the proposed alcohol and drug-related MDC, taken as a whole, would decline about 4.8 percent.

The proposed DRG weights would be applied to alcohol and drug-related services furnished by hospitals currently under the prospective payment system, as well as to currently excluded hospitals and units as they reenter the system.

F. Wage Index

1. Background

As discussed in section III of the preamble, the proposed rule incorporates a new wage index based on our own survey data rather than on the hospital wage and employment data obtained from the ES 202 reporting system of BLS. The new survey-based wage index wold be applied in two ways:

- Prospectively, to adjust the Federal rates (adjusted average standardized amounts) to account for differences between area wage levels; and
- Retrospectively, to determine overpayments and underpayments resulting form the use of a wage index based on BLS data since the implementation of the prospective payment system for cost reporting periods beginning on or after October 1, 1983.

The proposed wage index is discussed in detail in the *Report on Hosptial Wage Index Required by Section 2316(a) of Public Law 98–369*, submitted to Congress by the Department on March 29, 1985. That report includes detailed estimates of the effects of implementing the proposed index and an alternative wage index that we considered using, based on certain adjustments to the survey data to exclude wages and salaries for certain classes of hospital employees.

2. Comparison of the BLS Index and the Proposed Index

Despite some rather significant differences between the BLS index currently used under the prospective payment system and the proposed survey-based wage index, the proposed index correlated highly with the BLS index. That is, both indexes appear to measure similar activity and demonstrate similar variability. (Specifically, the proposed wage index, when correlated with the current index, produced a Pearson correlation coefficient of 0.85.)

The table below presents a summary of the changes in the survey wage index values compared to those developed from 1981 BLS ES 202 hospital data. Note that this analysis was taken from the Wage Index Report to Congress, which was developed before the St. Louis MSA was consolidated with two other MSAs. Therefore, the analysis reflects 363 urban/rural areas, rather than the current 361 areas.

As expected, use of survey data rather than BLS data produces both increases and decreases across the 363 urban and rural areas; that is, the index for some

areas goes up relative to the BLS index, and the index goes down for other areas. For the 363 urban/rural areas, the proposed new wage index is *lower* than the current wage index for 166 urban areas and for the rural areas of 21 States. In those areas where the proposed index decreased, the amount of the decrease averaged 5.23 percent in urban areas and 4.70 percent in rural areas. The proposed new wage index increased in 149 urban and 27 rural areas, as compared with the current index.

COMPARISON OF SURVEY-BASED AND CURRENTLY USED BLS HOSPITAL WAGE INDEXES

(Number of areas affected)

	Proposed index higher	Avg. percent change	Proposed index lower	Avg. percent change
Urban	149	5.00	166	5.23
Rural	27	6.04	21	4.70
Overall	176	5.14	187	5.17

There are a number of reasons that could be presented for the changes that occurred in the proposed survey-based index compared to the current BLS index. Certain of these changes most likely are due to the fact that the proposed index corrects the part-time employment problem of the BLS data. Intuitively, one would expect that the incidence of the use of part-time employees in more common in rural areas than in urban areas, although not all rural and urban areas react the same way to this need. Rural hospitals are more susceptible to small-scale changes in their occupancy levels, and using part-time employees likely gives these hospitals more managerial control. Thus, it is not surprising to note that for rural Nebraska, the proposed index value is higher than the BLS index value. A similar situation holds for rural Iowa.

Conversely, if urban hospitals are more likely to employ full-time workers, then a BLS wage index that essentially counts all employees as full-time would tend to advantage urban over rural hospitals. Once part-time employees are recognized, one would expect that a number of urban wage indexes would decline as compared to the BLS index. In fact, this is what happens in a significant number of urban areas.

3. Prospective Impact of the Proposed New Index

Implementation of the survey-based gross wage index prospectively for cost reporting periods beginning on or after October 1, 1985 would have several effects. Of course, each hospital would be relatively advantaged or disadvantaged according to whether the index value for its geographic area increased or decreased. (Note, however, that a number of other factors would affect whether a hospital's actual total prospective payment revenue increased or decreased.) In addition, the new index would be used to restandardize the standardized amounts on which the Federal national and regional rates are based. This should have a negligible effect on the national urban and rural rates, but would affect the relative level of regional rates significantly.

Since FY 1986 is the last year during which regional rates will be included in the blended Federal rates, this secondary impact of the new index would be time-limited. Nonetheless, for FY 1986, some regional rates would go up and others would go down, with concomitant advantages and disadvantages for affected hospitals.

All hospitals under the prospective payment system would be affected, although some only slightly. For FY 1986, affected hospitals would fall into four groups, as follows:

- Those doubly advantaged by increases to both their wage index values and their regional rates;
- Those doubly disadvantaged by decreases to both their wage index values and their regional rates;
- Those advantaged by an increased wage index value and relatively disadvantaged by a revised regional rate; and
- Those disadvantaged by a decreased wage index value and relatively advantaged by a revised regional rate.

In addition, the changes to the wage index would interact with proposed changes to the DRG weights, the effects of the increased proportion of the national rate in the Federal rate, and the change in blending proportions between Federal and hospital-specific portions. (For further discussion, see section J, below, especially the table summarizing the anticipated percent payment changes for FY 1986.

4. Retroactive Impact of the Proposed New Index

Under section 2316(b) of Public Law 98-369, any new wage index that is adopted as a result of the study conducted in accordance with section 2316(a) must be implemented retroactively for hospital cost reporting periods beginning on or after October 1, 1983.

Assuming that a revised wage index is implemented effective October 1, 1985, some hospitals (that is, those whose reporting periods began October 1, 1983) will have been paid using the BLS index for two full years. If a hospital's payments based on a revised wage index would have been higher than its payments using the current index, the Medicare program would have to compensate the hospital for the underpayments. Conversely, where a hospital has been overpaid using the current index compared to what it would have been paid if a revised index had been used, the program would have to recoup the overpayments that have been made.

Section 2316(b) of Public Law 98-369 provides that any resulting overpayments or underpayments "for the first cost reporting period" for which a hospital is subject to the prospective payment system shall be adjusted "in the succeeding cost reporting period." This language would appear to have originated from Congress' expectation that a revised wage index would be in place in time for the FY 1985 update of the system. Under these circumstances, payment adjustments only would have been required for that portion of a hospital's first fiscal year under the prospective payment system and could have been implemented effective with the succeeding cost reporting period. However, the need to follow-up on the wage index survey due to unsatisfactory initial results has delayed the development of a revised index. The prospective payment rates effective October 1, 1984 presently incorporate a wage index derived from BLS data. Therefore, retroactive application of a revised wage index, effective Octoter 1, 1983 would result in the creation of overpayments/underpayments for more than one year.

In order to assess the financial consequences for hospitals subject to the prospective payment system if the proposed new wage index were implemented retroactively to October 1, 1983, we prepared estimates of impact for each urban/rural locale using the index values developed from the survey. These area impact estimates assume a new wage index would be adopted October 1, 1985, retroactive to October 1, 1983. Thus, overpayments and underpayments are estimated for the period October 1, 1983 through September 30, 1985. These impact estimates and the assumptions underlying them are included in the above-cited report to Congress. The report to Congress did not include estimates of the effects of the proposed wage index on FY 1986 payments because at that time we had not yet developed the applicable Federal rates and proposed DRG weights. Now such estimates are possible, and section J of this appendix includes a table summarizing, by census region, urban/

rural location, and bed size, the projected percent change that would result from the proposed DRG weights and wage index. Because we would collect overpayments and pay underpayments resulting from retroactive application of the wage index in FY 1986, that table also includes our estimate of the effect that retroactive application would have on total payments for affected groups of hospitals.

To illustrate the impact on hospitals in a given locale, we have focused on the Charlottesville, Virginia MSA, an area that would incur a substantial reduction in prospective payments were the proposed wage index implemented. The wage index for the Charlottesville, Virginia MSA would decline from the 1.2899 BLS index to a survey-based index of .9287. Over the period from October 1, 1983 through September 30, 1985, hospitals in that MSA, assuming an average case mix (that is, a case-mix index of 1.0), and without regard to any teaching activity, would have been overpaid an estimated $3,670,977. The average reductions in the Federal rates over all discharges in that MSA for the first two years under the prospective payment system through September 30, 1985 are 21.95 and 22.08 percent, respectively.

Before proceeding further, it should be noted here what these overpayment figures actually represent. While the difference that would occur in the Federal rates in the Charlottesville MSA using the new index compared to the BLS index is $768 in the first year of the prospective payment system and $794 in the second year, the actual dollar amount of the overpayment for these two years is less than what would result from simply multiplying the dollar difference by the number of discharges. This is because the wage index is applied *only* to the Federal rate, and the Federal rates comprised only 25 percent of a hospital's prospective payment rate for a cost reporting period that began in FY 1984, and 50 percent for a cost reporting period that began in FY 1985. When analyzing these figures, it should also be noted that not all hospitals use the Federal fiscal year as their own fiscal year. Therefore, if a new index were implemented and applied retroactively beginning October 1, 1985, only those hospitals that have the same fiscal year as the Federal government would have had two full years using the BLS index. Other hospitals would have had one full first year and varying proportions of a second year, depending upon their individual fiscal years. Because of hospital specific differences in case mix and teaching activity, the actual dollar impact within an area will also differ from hospital to hospital depending upon the magnitude of the case mix index and the degree of teaching activity.

Example

Hospital A is the only hospital in the hypothetical Simpsonville MSA. Because of the size of the decline in the Simpsonville survey-based wage index compared to the current BLS index, hospital A's estimated reduction in prospective payments during the period October 1, 1983 through September 30, 1985, without regard to case mix and teaching activity, is $1,000,000. Hospital A, however, has a case-mix index value of 1.2 and an indirect medical education adjustment factor of 1.1. The actual decrease in hospital A's prospective payments is equal to:

$1,000,000 × 1.2 × 1.1 = $1,320,000

If hospital A were not a teaching institution and had a case-mix index value of .9, the estimated impact would be equal to $1,000,000 × .9, or $900,000.

We point out that while the actual impact of implementing the proposed wage index would be affected by a facility's case mix and degree of commitment to teaching, the percentage change in the Federal rates is unaffected when these two variables are considered. This is so because the effects of case mix and teaching activity on the Federal rates computed using the BLS and proposed new wage indexes are presumed to be constant for each hospital's fiscal year.

While there are areas that would incur substantial overpayments if the proposed wage index were implemented, there are others, of course, that would benefit because of underpayments due. For example, rural hospitals in North Dakota would receive $823,049 or $31 per discharge, if the proposed wage index were applied to all discharges under the prospective payment system since October 1, 1983.

Retroactive application of the revised wage index would require reconciliation of any overpayments/underpayments that occurred from use of the BLS wage index. This could be accomplished in a variety of ways. As discussed in section III of the preamble, our preference is to have all overpayment and underpayments repaid in 26 equal payments during FY 1986. This would ensure that payments made by HCFA to repay underpayments would be roughly balanced by receipt of payments by hospitals repaying overpayments. The symmetrical flow of these payments would protect the Part A Trust Fund from undue fiscal stress. However, we recognize other methods are feasible, and have solicited comments and suggestions.

For discharges occurring after implementation of the new index (that is, after October 1, 1985), the per-discharge payment could be decreased or increased so as to accomplish full reconciliation of the previously overpaid/underpaid amounts within one year. Of course, implementation of a new wage index would also have a prospective impact on discharges occurring after implementation. Thus, hospitals in an area whose new wage index results in lower prospective payments than the one used to make payment for discharges occurring during the first two years of the prospective payment system would receive *lower* reimbursement for future discharges than would have occurred using the previous BLS index values. This would occur *at the same time* that payments are adjusted lower still to recoup previously overpaid amounts. An alternative to the above reconciliation procedure would be lump-sum recoupment/payment of previously overpaid/underpaid amounts.

For example, assuming that, under current law, the Medicare program would be required to collect the Charlottesville overpayment of $3,670,977 during the 12-month period beginning October 1, 1985 (that is, the assumed implementation date of a revised index), we estimate that the per-discharge impact due to the revised wage index would be approximately $392 per discharge (that is $3,670,977 divided by 9,359, the reported Medicare discharges for the Charlottesville MSA for calendar year 1983). (This figure takes into account *only* the differences due to the wage index and the difference in the regional/national blend between the first and second years of the system. The actual amount of the overpayment in the Charlottesville MSA would be different from this figure due to the multiplicative effect of other adjustments, such as the case-mix index. To the extent the average case-mix index value for a Charlottesville hospital is above one (1) the overpayment would be greater than stated here. The converse would be true if the average case-mix index value were less than one (1).)

G. Excluded Hospitals

As discussed in section III. of the Addendum, we are proposing to increase the target amounts for hospitals and units excluded from the prospective payment system by a target-rate percentage of 0.0 percent. In effect, this means that for cost reporting periods beginning in FY 1986, each hospital or unit, subject to the rate-of-increase

limits (§ 405.463) would have a ceiling equal to the ceiling for its previous cost reporting period. We estimate that this would result in $20 million in savings for FY 1986 Medicare Part A expenditures, compared to the maximum level of expenditures allowable under law.

The effect this proposal would have on affected hospitals and units would vary depending on each one's existing relationship of costs per discharge to its target amount for FY 1985, the increase in inpatient costs, and the relative gains in productivity (efficiency) the hospital or unit is able to achieve. For hospitals and units that continue to achieve per discharge costs lower than their target amounts, the primary impact would be a reduction of the level of additional payments made under § 405.463(d)(2) proportional to the increase in per-discharge costs. For hospitals and units whose costs are currently in excess of their target amounts, we would expect FY 1986 excess costs to increase, unless the hospitals are able to achieve significant productivity improvements.

In general, we expect this proposal to increase existing incentives for economy and efficiency experienced by excluded hospitals and units. We do not believe that even these proposed limits would achieve incentives comparable to those produced by the prospective payment system. Therefore, we will, as required under the law, continue to study means for establishing an appropriate prospective payment methodology for those hospitals and units that are currently excluded from the prospective payment system. Nonetheless, we believe this proposal would ensure that services furnished to beneficiaries by affected hospitals and units would, for the most part, be paid for at a level no higher than necessary for the efficient delivery of needed health services.

H. Indirect Medical Education Costs

The changes we are proposing to make in the regulation governing payment for the indirect costs of medical education would have only a slight effect on the level of those payments.

We considered making other changes in the methodology for calculating the indirect medical education cost adjustment factor. We are concerned that the current factor, when doubled as required by section 1886(d)(5)(B) of the Act, results in substantial overpayments to teaching hospitals, exceeding significantly their probable real indirect costs for their medical education programs. We estimate that eliminating the doubling of the education adjustment factor would save $695 million in FY 1986 and more in each later year.

The President's FY 1986 budget includes a proposal that, if enacted, would return the formula for calculating the indirect costs of medical education to the previous level. If this proposal is enacted timely enough, we plan to implement the change for discharges beginning October 1, 1985.

I. Referral Centers

As discussed in section IV. E. of the preamble to this proposed rule, we are proposing to update the case-mix criteria for hospitals to qualify as referral centers under our regulations at § 412.96(c). Currently, there are about 135 referral centers, all of them rural hospitals that are paid, under the prospective payment system, on the basis of urban standardized amounts as a result of their referral center status. We continue to identify more referral centers and expect more to meet the criteria effective for FY 1985 before October 1, 1985.

More than 95 percent of the referral centers are eligible for higher payment because they meet the criteria of § 412.96(c) rather than those of § 412.96(b). These criteria refer to case-mix index, number of discharges, medical staff, source of inpatients, and volume of referrals. Each qualifying hospital must meet both the case-mix and discharge criteria, and at least one of the other criteria. Thus, the level at which the case-mix criterion is set could often be the deciding factor in whether a specific hospital can demonstrate that it has met the criteria two out of three years at the time of its triennial review.

We expect that a substantial number of the current referral centers would not meet the proposed case-mix criterion for FY 1986. Assuming that all current referral centers have met the criteria for FY 1985, the continuation of their special payment status would then depend on whether they met the FY 1987 criteria. If a rural hospital that had been treated as a referral center met neither the FY 1986 nor the FY 1987 criteria, it would be paid on the basis of the Federal rural rate for its FY 1988 cost reporting period.

At this time, we are unable to determine how many hospitals may eventually lose their referral center status as a result of the proposed FY 1986 case-mix criterion. However, we believe the proposed criterion will afford us a reasonable measure of the degree to which hospitals seeking special treatment under this provision differ from the average rural hospital.

J. Updated Payment Rates and Resulting FY 1986 Payment Amounts

One of the primary functions of this document is to publish updated prospective payment rates in accordance with requirements in the law and regulations (section 1886(d) of the Act and § 412.8 of the regulations). Accordingly, the Addendum to this document, which is printed after the text of the propopsed changes in the regulations, sets forth tables of new Federal national and regional rates, new DRG relative weights and outlier thresholds, and new factors for calculating hospital-specific rates. In accordance with section 1886(d)(1)(D) of the Act, the Federal rate for FY 1986 will be a blend set at 50 percent of the Federal regional rate plus 50 percent of the Federal national rate. This blend will take effect for all Federal rates for all discharges occurring on or after October 1, 1985. Further, as each hospital begins its third year under prospective payment, with its cost reporting period beginning on or after October 1, 1985, the relative proportions of hospital-specific and Federal portions will change from 50 percent and 50 percent, respectively, to 25 percent hospital-specific and 75 percent Federal.

In FY 1986, for the first time, the updated Federal rates (that is, the adjusted average standardized amounts) will not be adjusted to achieve "budget neutrality". Under section 1886(e)(1) of the Act, for FYs 1984 and 1985, the rates were adjusted so that estimated aggregate payments for inpatient hospital services would be the same as they would have been had the Medicare payment system in effect at the time of the prospective payment legislation continued in effect. This requirement for budget neutrality does not apply to rates for FY 1986 and thereafter.

In determining the level of the payments and the adjustment factors to be applied to them, such as DRG weights and wage indexes, two issues of impact are paramount: the size of the prospective payment pie, which may be expressed in terms of either the average payment per case or the estimated total expenditures, and how that pie will be cut, that is, how payments will be distributed among DRGs or hospitals. Under budget neutrality, the size of the pie, expressed as average payment per case, was, to the extent it could be predicted and controlled, prescribed by law. As a result, in assessing the impacts of the proposed rates, adjustments, and special treatment provisions of previous proposed rules, we focused primarily on the distributive

effects of our proposals. This year, however, our primary concern is the proper level of payments, and the major alternatives we considered in setting the proposed payment rates were assessed in light of this concern.

By the end of 1984, we realized that, despite our best efforts to achieve budget neutrality, the FY 1985 prospective payment rates were too high. As a result, in preparing the President's budget, we assumed that the FY 1986 payment rates would be maintained at the FY 1985 level.* At that time, we did not realize that later data and experience would show that we would have substantial legal and technical justification to actually reduce the rates.

In the end, we had to choose among a fairly wide range of potential percentage changes. The hypothetical upper end was constrained by the legal requirement, under section 1886(b)(3)(B) of the Act, that rates for FY 1986 be increased by no more than the forecasted market basket increase plus one quarter of one percentage point. Thus, the highest conceivable increase for the FY 1986 prospective payment rates was +5.1 percent.

On the other hand, as explained in section II.A.3. of the Addendum to the proposed rule, we had a number of reasons for finding the FY 1985 prospective payment rates too high. Considering the combined effect of case-mix increases, market basket forecasting error, inaccurate cost per case assumptions, and the consequences of using unaudited cost data as a basis for rate-setting, the FY 1985 rates are probably overstated by at least 8.5 percent.

*U.S. Budget in Brief, Fiscal Year 1986. Executive Office of the President, Office of Management and Budget, Washington, D.C. February 4, 1985. Page 45.

ProPAC's first recommendation was a major alternative that had to be considered. It recommended increasing the FY 1985 rates by the forecasted market basket increase, minus one percentage point, plus an allowance for the estimated increase in real case-mix complexity during fiscal year 1985. It described the negative one percentage point, or "discretionary adjustment factor," as a combined adjustment of a positive allowance for scientific and technological advancement and a negative allowance for productivity improvement and hospital product change. It also recommended that we make corrections for market basket forecasting error. In essence, by identifying a number of factors to be considered in determining an update percentage, including both negative and positive values, ProPAC performed an analysis very similar to ours.

In considering the same kinds of things as ProPAC did in developing its proposed discretionary adjustment factor, we developed categories and allowances with some analytic differences, but nonetheless arrived at a proposed policy target adjustment factor of −1.5 percentage points, in lieu of their −1.0 percentage point factor.

In theory, it would be possible to choose to combine the various corrections, adjustments, and inflation factors in a variety of combinations, yielding nearly any percentage change between +5.1 percent and −8.5 percent. However, we believe the preponderance of the evidence, including recent industry reports on hospital profitability margins, shows that current payments are already set at levels that are at least adequate. Accordingly, in section II.A.3. of the Addendum, we set forth the factors we believe are best, and show that these factors, in combination, would result in a −2.85 percent reduction of the FY 1986 prospective payment rates. For the reasons given in the Addendum, we are proposing to maintain FY 1986 Federal rates at the same level as FY 1985.

The proposed Federal rates would change only as a result of restandardization of the base data to reflect the survey-based gross wage index. Further, as explained in section II. D. of the Addendum, we are not proposing to increase the hospital-specific rates for cost reporting periods beginning in FY 1986. As a result, the amounts a hospital would expect to receive from prospective payments for FY 1986 discharges would change as a result of the effects of the proposed new wage index, the proposed new DRG weights, and the statutorily required changes in blending of Federal and hospital-specific portions.

We have projected the separate and combined expected effects of these changes on payments of census regions, urban/rural status, and bed-size. This estimate of payment changes is based on 4962 hospitals with Medicare discharges in the PATBILL file and for which hospital-specific information (hospital-specific rates, resident/bed ratios, rural referral center status, and so forth) was provided by the fiscal intermediaries. We did not include any hospitals from waiver States (Maryland, Massachusetts, New Jersey, New York) or hospitals excluded from the prospective payment system. This projection also reflects the impact of the statutorily required retroactive application of the survey-based wage index. (As explained in section III of the preamble to this proposed rule, we are deeply concerned about the effects of such retroactive application, which are discussed in section F.4. of this appendix.) The following table summarizes our findings.

TABLE-ESTIMATED IMPACT OF PROPOSED CHARGE WEIGHTS, THE PROPOSED SURVEY-BASED WAGE INDEX, AND THE FY 1986 PAYMENT BLEND ON FY 1986 OPERATING PAYMENTS

	Percent Change in Total Payments for FY 1986 Due to:					
	Proposed DRG Weights	Proposed Wage Index 1/	FY 1986 HSP-FED Blend 2/	Combined Prospective Effects	Retroactive Wage Index Application	Total Combined Effects
All Hospitals	0.11%	-0.03%	0.01%	0.07%	-0.03%	0.04%
By Census Regions						
New England	0.49	0.38	1.38	2.83	0.49	3.32
Mid Atlantic	0.53	-0.48	0.86	0.42	-0.56	-0.14
South Atlantic	-0.12	-0.44	0.91	-0.32	-0.54	-0.86
East North Central	-0.03	-0.14	-0.26	-0.44	-0.16	-0.60
East South Central	-0.33	0.12	1.86	0.88	0.31	1.19
West North Central	0.26	-0.23	-1.02	0.14	0.24	0.38
West South Central	-0.19	-0.13	-0.31	-1.04	-0.11	-1.15
Mountain	0.17	-0.07	-0.41	-0.43	-0.07	-0.50
Pacific	0.49	0.48	-0.95	0.90	0.54	1.44
Urban Hospitals	0.26	0.00	0.08	0.37	0.01	0.38
0-99 Beds	-0.33	0.17	2.43	2.47	0.23	2.70
100-404 Beds	0.15	0.06	-0.29	0.02	0.07	0.09
405-684 Beds	0.38	0.04	0.36	0.81	0.05	0.86
685 + Beds	0.66	-0.39	0.00	-0.04	-0.51	-0.55
Rural Hospitals	-0.60	-0.20	-0.32	-1.34	-0.23	-1.57
0-99 Beds	-0.11	-0.03	0.02	-1.18	-0.03	-1.21
100-169 Beds	-0.44	-0.15	-1.33	-2.14	-0.16	-2.30
170 + Beds	-0.05	-0.45	0.08	-0.88	-0.54	-1.42

1/ Prospective application only.

2/ The effect of the change in blend combines two effects. The new Federal rate blend (50 percent national rate and 50 percent regional rate) is effective for all discharges occurring on or after October 1, 1985, and therefore affects all FY 1986 payments. The new blend of the hospital-specific portion (HSP) and the Federal rate (FEP) will take effect as each hospital begins its FY 1986 cost reporting period.

Note that the magnitude of the changes is generally small and that changes to DRG weights and wage indexes would often offset each other. Nevertheless, it is clear that some groups would be advantaged and others disadvantaged. Generally, large urban hospitals in New England or on the Pacific coast would be benefited most by these changes. Small rural hospitals, especially those in the South, would be disadvantaged most.

The change in blending gives more effect to the Federal national rates and less to hospital-specific rates. Thus, a hospital's payments would be affected by the relation between its Federal national rate and its hospital-specific rate. If the applicable Federal rate is higher, a hospital would benefit; if lower, it would be disadvantaged. Even if the payment rates are maintained at the same level for FY 1986, we expect the average payment per case to increase, because many FY 1985 discharges were for hospitals with cost reporting periods beginning in FY 1984, and thus were paid for using a lower hospital-specific rate.

K. Conforming and Minor Proposed Regulation Changes

We are proposing several other regulations changes that would have relatively minor impacts.

- The revisions to the medical review regulations to conform to the recently published PRO regulations would not have a significant effect on provider revenues.
- The elimination of the prepayment review requirement for all cost outlier payment claims would be administratively simpler for us and for the hospitals, and would give the hospitals quicker payment, but would not effect aggregate revenues significantly.
- The clarification of when hospitals may send denial notices to beneficiaries does not represent a change of policy. It may benefit beneficiaries who might otherwise be sent an inappropriate notice, or hospitals who may not have sent an appropriate notice.

L. Quality of and Access to Care

As we have stated on other occasions, the prospective payment system endeavors to change hospital behavior through financial incentives. While our goals are essentially economic, we are also acutely concerned that for some hospitals economic incentives might, in some cases, overshadow concerns for the quality of care delivered and access to appropriate services and levels of services.

There are a number of public and private programs involved in evaluating the quality of hospital care. Utilization and Quality Control Peer Review Organizations (PROs) have, under contract with the Health Care Financing Administration, responsibility for evaluating whether the quality of services meets professionally recognized standards of health care and may intervene to correct various patient care problems. In addition, we survey

hospitals for compliance with the health and safety requirements of the conditions of participation for hospitals participating in the Medicare program (42 CFR Subpart J). (Accredited hospitals are deemed to meet almost all of those requirements.) There are additional Federal programs involved in review of specific areas such as radiation safety and infectious diseases. Voluntary second-opinion programs and the efforts of PROs appear to have contributed to a decline in unnecessary surgery.

On the State level, health departments enforce a variety of facility and professional licensure requirements aimed at reducing health care risks and ensuring that only appropriately trained personnel provide services.

Numerous private programs are involved in quality issues. The Joint Commission on Accreditation of Hospitals and the American Osteopathic Association accredit facilities meeting their high standards of care. Almost all of the health professions themselves have and review professional standards of practice. Finally, health care literature suggests that a large number of special research projects are underway, publicly and privately financed, and aimed at measuring various aspects of the quality of hospital care.

We do not at the present time have objective data demonstrating that the quality of or access to care has declined. We have noted a significant decrease in average length-of-stay, a slight decrease in admissions, and an increase in average case mix. The hospital delivery system seems to be adjusting to prospective payment generally as we anticipated, at least as measured by utilization and consumption of resources.

To date, there is no systematic evidence linking the behavioral changes that have taken place to any of the potential problems in quality that some expected to result from the changed incentives (for example, shift of acutely ill patients to lower-level providers unable to furnish necessary care, or inappropriate reductions of diagnostic testing or support services). Moderate shifting of patients to less expensive environments has occurred, but the extent of such shifting is not yet conclusive. However, we have seen no data showing an increased number of deaths or complications as a result. Simply stated, a shorter stay in the hospital has not equated to lower quality care. There may be reason to believe that, in many instances, shorter stays expose patients to fewer risks.

Ensuring proper access to care is of great concern to us. It is possible that the prospective payment system may in time create incentives for hospitals to establish more outreach programs, expand outpatient services, and form delivery systems to reach populations that were once ignored. To some extent, this seems to be occurring. The hospital industry's literature encourages hospitals to develop outreach programs and frequently suggests that these will strengthen a hospital's financial picture.

The issues of quality and access are particularly important to certain subgroups of enrollees. Disabled enrollees (especially aged and disabled), ESRD enrollees, and those dually entitled to Medicare and Medicaid coverage ("crossovers") have certain health and socio-economic characteristecs that make them particularly vulnerable to changes in health care programs. For example, ESRD enrollees are hospitalized at a rate three times as often as other enrollees. Also, we know that the dually eligible are characterized by higher hospital utilization and cost relative to other aged enrollees. In 1983, this group represented 2.6 million beneficiaries, or about 11 percent of an estimated 23.5 million noninstitutionalized aged persons covered by Medicare. Thus, a significant portion of the Medicare beneficiary population is particularly sensitive to changes in health care programs and we must ensure that their health care needs are met.

We believe that growth in health care expenditures can be restrained without harming patients. In the short-term, we have proper safeguards in place to protect patients. On a long-term basis, there are mechanisms (both public and private) that will enable us to recognize potential problem areas and respond through appropriate changes in policy. The changes proposed in this document essentially represent further refinement of the basic prospective payment system. We do not believe any of these changes will create new problems in quality or alter the incentives that might add risks to patient care.

M. Alternatives Considered

Throughout the discussions in the preamble and this analysis, we have explained why we are proposing to do one thing rather than another. As noted in section I.B. of the preamble, as part of our analysis we have been considering various approaches to updating DRG weights and wage indexes while trying to minimize fluctuations of payments. Many interrelated decisions are involved in this process, and the number of possible combinations of different wage indexes, different DRG weights, and different update factors, is large. Further, there are additional alternatives that had to be considered within each of the key technical methodologies for deriving the proposed wage index, DRG weights, and Federal rates. Altogether, there are a potentially enormous number of permutations.

Nonetheless, we have been particularly concerned with the impact of certain main options, and we have reviewed them in the light of how they would interact with each other. These include, for example, using unstandardized DRG weights, rather than weights standardized for geographic wage differences. This would have had the effect of "decompressing" average case mix relative to standardized weights, and would have disadvantaged rural hospitals. We also considered all the ProPAC recommendations. Each of the factors taken into consideration in the development of the proposed FY 1986 standardized amounts was challenged and debated both individually and in combination with other factors.

N. Summary and Conclusions

E.O. 12291 requires us to assess the benefits, costs, and net benefits of all rules, major or otherwise. For major rules, we must discuss those costs and benefits in impact analyses, and show that the potential benefits outweigh the potential cost to society. In addition, we must discuss alternative methods of achieving the objectives we propose in our regulations. Throughout the preamble, addendum, and other sections of this impact analysis, such alternatives are discussed. In this summary, we assess the overall costs of the proposals we are making, the overall benefits, and the resulting net benefits.

For the most part, the costs and disadvantages that could result from these proposals would take the form of reductions in anticipated revenue to affected hospitals. Most of the proposals would have their major effect through their influence on the level of FY 1986 prospective payments. The only significant exception would be the retroactive application of the proposed wage index.

As we have said before, the primary benefit expected to result from this proposed rule is the maintenance and effective management of the prospective payment system itself. The incentives of this system are expected to produce substantial benefits in the form of economy and efficiency of operation of participating hospitals, and as improvements in trends of the health

care marketplace as a whole. As noted earlier, the objective of these proposals is to refine the prospective payment system. Whereas the system as a whole has had a large and dramatic impact, the proposed refinements are of a marginal nature, rather than large-scale adjustments.

We believe that, from this perspective, the overall benefits to society, including the substantial benefit of improved budgetary control, more than offset any resulting liabilities. For the above reasons, we believe that this analysis meets the objectives of E.O. 12291 and the Regulatory Flexibility Act as noted in the Introduction to the Regulatory Impact Analysis.

Appendix B—A Framework for Analyzing Rate Increase Factors*

A. Overview

Section 1886(e)(4) of the Act requires the Secretary to update individual DRG rates beginning in FY 1986, taking into account the recommendations of the Prospective Payment Assessment Commission (ProPAC). Section 1886(e)(4) of the Act reads as follows:

> (4) Taking into consideration the recommendations of the Commission (that is, the Prospective Payment Assessment Commission, or ProPAC) the Secretary shall determine for each fiscal year (beginning with fiscal year 1986) the percentage change which will apply for the purposes of this section as the applicable percentage increase (otherwise described in subsection (b)(3)(B)) for discharges in that fiscal year, and which will take into account amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality.
>
> As prescribed by section 1886(e)(2) of the Act, the Commission, in making its recommendations to the Secretary, "shall take into account changes in the hospital market-basket described in subsection (b)(3)(B), hospital productivity, technological and scientific advances, the quality of health care provided in hospitals (including the quality and skill level of professional nursing required to maintain quality care), and long-term cost-effectiveness in the provision of inpatient hospital services.

Four of the above factors (market basket productivity, new technological and scientific advances, and long-term cost-effectiveness) are related to inputs and outputs in the production of hospital inpatient care. For purposes of this conceptual framework, we have defined another set of variables as *outcomes*. Quality and intensity of all factors (including the quality and intensity (skill level) of professional nursing services) is reflected in the four input/output factors. Outcomes are a result of the four input/output factors. Outcome factors include quality of health care, access to care, financial viability of the hospital industry, and Medicare Part A Trust Fund viability. The DRG rate percent increase factor should be set so that it provides incentives for favorable outcomes under the prospective payment system. HCFA is aware of the importance of these outcome variables. A management information system has been designed to monitor outcomes under the prospective payment system. Data generated by this monitoring system will be used to assist in improving the overall design of the prospective payment system, including the setting of the rate increase factors.

B. Analytical Framework

We have developed factors for productivity, new technology, scientific advances, and the elimination of ineffective practice patterns, which are necessary to insure the cost-effective delivery of care. Each of these factors interact with the others, to some extent, and have an impact on the quality of care. We have determined an aggregate percent increase value for each of these factors, making conservative assumptions and considering the potential effect on the quality of inputs and the attendant impact on quality of care as an outcome. We have combined these values into a proposed composite policy target adjustment factor.

This section attempts to translate the intent of the prospective payment system rate increase regulations into an algebraic accounting identity for the four input/output factors. As mentioned above, quality of hospital care is considered to be an outcome variable that results from the four input/output factors.

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Accounting Identity

A B C D

$$\text{o } \frac{\text{Cost}}{\text{Number of discharges}} \equiv \left(\frac{\text{Cost}}{\text{Real input}}\right) \left(\frac{\text{Real input}}{\text{Real output}}\right) \left(\frac{\text{Real output}}{\text{Number of discharges}}\right)$$

In Words

o Average cost per discharge ≡ (Average cost per unit of input) (Average relationship between inputs and outputs, that is, the inverse of productivity) (Average real output per discharge)

Term A is the average cost per discharge for a typical DRG.

Term B (cost/real input) is nominal cost divided by real input (inflation-adjusted input). The hospital market basket is used to adjust for input price inflation specific to the hospital industry. Term B is an expression of the hospital market basket index, that is,

$$\frac{\text{Cost}}{\text{real input}} = \text{market basket index}$$

or with algebraic manipulation

$$\frac{\text{cost}}{\text{market basket index}} = \text{real input.}$$

Alternatively, cost is the product of quantity of inputs times their respective factor prices. Thus, when cost is divided by the quantity of inputs, the result is price (the inputs cancel), or the HCFA market basket.

$$\text{Term C} \left(\frac{\text{real input}}{\text{real output}}\right)$$

expresses the average relationship between the quantity of input and the quantity of output and reflects productivity. The inverse of the standard productivity relationship (output per unit of input) is used because productivity is an offset factor; that is, positive productivity gains should be associated with reductions in the rate of increase in the DRG rate. The term *productivity* is used interchangeably with the term *efficiency*.

$$\text{Term D} \left(\frac{\text{real output}}{\text{number of discharges}}\right)$$

is inflation-adjusted output per discharge or output intensity per discharge.

In this framework, the intent of the regulation is interpreted as a need to classify hospital outputs per discharge into two categories: cost-effective outputs and cost-ineffective outputs. Cost-effective outputs per discharge are effective in two senses: (1) The outputs are appropriate to hospital inpatient settings, rather than some lower cost setting such as ambulatory care (for example, preadmission testing), skilled nursing home care, or home health care; and (2) There is a value for the money expended (in terms of enhanced health status compared to cost). Outputs per discharge associated with cost-effective new technologies and scientific advances are expected to add to the current base of cost-effective outputs per discharge. Thus, cost-effective outputs per discharge are an add-on factor.

Cost-ineffective outputs per discharge are ineffective in two senses: (1) the outputs are more appropriate to cost settings less expensive than inpatient hospital, and/or (2) there is not value for money expended (in terms of enhanced health status compared to cost.) Cost-ineffective outputs per discharge are an offset factor, since hospitals are reducing the use of ineffective outputs incorporated in base period practice patterns.

Thus, real output per discharge (Term D) in the accounting identity needs to be partitioned into two categories: effective and ineffective outputs per discharge.

$$\underbrace{\frac{\text{Cost}}{\text{Number of discharges}}}_{A} = \underbrace{\left(\frac{\text{Cost}}{\text{Real input}}\right)\left(\frac{\text{Real input}}{\text{Real output}}\right)}_{B\ C}\ \underbrace{\left[a\left(\frac{\text{Real output}}{\text{Number of discharges}}\right) + (1-a)\left(\frac{\text{Real output}}{\text{Number of discharges}}\right)\right]}_{D1\ \ D2}$$

The proportion of real output per discharge in the base DRG rate that is cost-effective (value for money expended) is reflected by the term "a." Likewise, the proportion of real output in the base DRG rate that is cost-ineffective is reflected by the term "(1-a)". Together, a + (1-a) totals 100 percent of real output per discharge.

It is important to understand the difference between the concepts of effectiveness and productivity (efficiency) and how they relate to prospective payment system incentives and the DRG percent increase factor.

Productivity measures output per unit of input and gets at the question, "Could the same output have been accomplished with fewer resources or with a different mix of resources?" [1] Effectiveness compares a hospital's objectives, such as improving health status, with its accomplishments and gets at the question, "Are we doing the right things?" [2] The elimination of selected diagnostic tests because their use does not improve health status and reductions in length of stay with no decrease in health status are two examples of changes in practice patterns to improve effectiveness.

There are four combinations of productivity and effectiveness:

TYPOLOGY FOR EFFICIENCY AND EFFECTIVENESS

	Cost effective outputs	Cost ineffective outputs
Efficiently produced outputs per discharge.	A—Cost-effective and efficient.	B—Cost-ineffective but efficient
Inefficiently produced outputs per discharge.	C—Cost-effective but inefficient.	D—Cost-ineffective and inefficient

Some outputs per discharge can be cost-ineffective (certain outputs per discharge are more appropriately provided in lower costs settings and/or there is not value for money expended) and produced inefficiently (excessive inputs per unit of output), as reflected in quadrant D of the typology. Quadrant C combines cost-effective outputs with inefficiency in production (that is, the right care is delivered inefficiently). In quadrant B, there is ineffectiveness, but the production is efficient (that is, less effective care is delivered, but efficiently). In quadrant A, outputs are cost-effective (appropriate to hospital inpatient setting and value for money expended), and the outputs are produced efficiently (low ratio of inputs to outputs).

A major objective of the prospective payment system is to provide incentives for hospitals to move a higher proportion of outputs per discharge from quadrants B, C, and D to quadrant A. Positive incentives are given by the add-on for effective new technology and science. Normative standards or policy goals are used to set the productivity and the cost-ineffective practice pattern offsets. When these shifts to efficient and effective care are made judiciously, it should result in enhanced quality of care while concurrently reducing the rate of increase in hospital costs.[3] Increasing productivity and eliminating cost-ineffective practice patterns allows hospitals to shift the mix of services provided to enhance quality of care and/or to increase profit margins. The latter improves hospital financial viability, improving access to and lowering the cost of capital.[4]

The framework for analyzing the DRG rate percent increase factor can be summarized as: Percent change in DRG rate = f(+MB, −P, +CEO, −CIO).

+MB = Market basket, a weighted average of the prices of inputs used to produce a *constant* quantity and quality of hospital care (holding all other factors constant). It is an add-on factor.

−P = Productivity (efficiency), measures output per unit of input. The question, "Could the same output have been accomplished with fewer resources or with a different mix of resources?" is answered by productivity measures. It is an offset factor.

+CEO = Cost effective outputs per discharge associated with new technologies and scientific advances. It is an add-on factor and is associated with enhanced quality of care.

−CIO = Cost ineffective outputs per discharge. This factor is an offset, since hospitals are expected to reduce the use of ineffective outputs.

Outcome variables such as quality of care, access to care, financial viability of hospital industry, and Medicare Part A Trust Fund viability are being monitored under the prospective payment management information system. One example of such monitoring is review by PROs, which are setting policy targets for reducing risk and improving quality of hospital care. In addition, distributional impacts by hospital type and geographical location are being monitored.

C. Cost-increasing Dynamics Under Retrospective Cost-based Medicare Reimbursement, FY 1967–83

Under cost-based reimbursement, Medicare costs per discharge rose substantially in excess of economy-wide inflation. This result could be expected from the incentives inherent in cost-based reimbursement.

The market basket rose faster than economy-wide prices and wages. There was not a strong incentive to be a prudent buyer of labor or other inputs. The higher the wages or prices paid by the hospital, the more Medicare paid the individual hospital. Also, the more expensive the skill-mix of employees, the more Medicare paid the hospital.

There were incentives for negative productivity or efficiency, since the more efficient the hospital, the less HCFA would reimburse.

Cost-based reimbursement did not have incentives to specifically encourage cost-effective outputs per discharge, nor did it have incentives to discharge cost-ineffective outputs per discharge. The incentive under cost-based reimbursement was to increase

[1] James Suver and Bruce R. Neumann, *Management for Health Care Organizations*, Oak Brook, Illinois: Hospital Financial Management Association, 1981. Also see, Marvin E. Mundel, *Improving Productivity and Effectiveness*, Englewood Cliffs, New Jersey: Prentice Hall, 1983.

[2] Ibid.

[3] Everett E. Adam, Jr., James C. Hershauer, and William A. Ruch, *Productivity and Quality: Measurement as a Basis for Improvement*, Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1981.

Avedis Donabedian, *The Definition of Quality and Approaches to its Assessment*, Ann Arbor, Michigan: Health Administration Press, 1980.

Steven P. Gray and Wilbert Steffy, *Hospital Cost Containment Through Productivity Management*, New York: Van Nostrand Reinhold Company, 1983.

John W. Williamson, *Assessing and Improving Health Care Outcomes: The Health Accounting Approach to Quality Assurance*, Cambridge, Massachusetts: Ballinger Publishing Company, 1978.

James W. Williamson, James I. Hudson, and Madeline M. Nevins, *Principles of Quality Assurance and Cost Containment in Health Care*, San Francisco: Jossey-Bass Publishers, 1982.

[4] Donald R. Cohodes and Brian Kinkead, *Hospital Capital Formation in the 1980's: Is There a Crisis?*, Baltimore: Johns Hopkins University Press, 1984.

all outputs per discharge, regardless of effectiveness—as long as no harm was done to the patient. Consequently, due to generous cost-based inpatient reimbursement, ineffective outputs are believed to have proliferated. Service outputs that could have been provided in other, more cost-effective settings were often provided in an inpatient setting. Outputs whose costs exceeded benefits in enhanced health status were also encouraged, since Medicare cost-based reimbursement formulas provided "open-ended spending. In this regard, the Medicare reimbursement system was similar to private health insurers.

D. Cost-decreasing Dynamics Under the Prospective Payment System

The prospective payment system tends to reverse the incentives of retrospective, cost-based reimbursement, but with a lag due to uncertainties and costs of adjustment. During the 3-year cumulative period of FY 1984–86, there should be a tendency to reduce the rate of increase of costs per discharge.

Under the prospective payment system, there is an incentive for hospitals to be prudent buyers of labor and nonlabor inputs. There is an incentive to pay labor at the "going" wage and to have an efficient skill-mix. Revenues not spent for labor costs can be used to purchase other goods and services which generate profits, increase competitive position, enhance quality of care, etc.

Hospitals are rewarded for productivity increases, since hospitals receive a fixed price per DRG. If a hospital is efficient and produces care at costs below the DRG rate, it retains resulting profits. Likewise, inefficiency is penalized, since costs above the DRG rate are not reimbursed. Productivity improvements during the FY 1984–86 period could be substantial, given that there were 17 years of negative incentives for productivity improvements during the FY 1967–83 period.

Under the prospective payment system, with fixed prices by DRG, there is an incentive to search out cost-effective outputs, that is, outputs whose value exceeds money expended, and the service output is appropriate for the hospital inpatient setting. Hospitals are likely to be more careful in adopting new cost-increasing technologies under the prospective payment system. Peer review and peer pressure, competition, threats of potential malpractice suits, and professional ethics will likely provide incentives to adopt new cost-increasing technologies when such technologies have a proven value in terms of increased health status compared to money expended. Thus, even with decreases in costs per discharge, hospitals have incentives to add certain new cost-increasing, health-enhancing technologies. This, of course, occurs by increasing productivity and by reducing cost-ineffective outputs. By reallocating inputs and outputs toward the more cost-effective practice patterns, cost per discharge can decrease in real terms, while quality of care can be potentially improved. When cost-ineffective outputs are eliminated, the inputs associated with these outputs must also be eliminated. Costs will not decline proportionately if the inputs are not eliminated, and negative productivity will result.

D. An Illustration of the Use of the Framework for the FY 1986 DRG Rate Percent Change [1]

Annual DRG increase factors	Percent changes	Brief rationale
1. Hospital Market Basket	+4.85	This is the percent increase forecast for FY 1986. It reflects a complete passthrough for hospital input price inflation. Because hospital industry wage rates are used in the market basket, shifts in occupational and skill mix are automatically included in the market basket.
2. Policy Target Adjustment Factors	−1.5	
a. Productivity (Efficiency) Offset.	−1.0	Valid productivity indexes are not currently available for the aggregate hospital industry. Various economy-wide productivity indexes developed by the Bureau of Labor Statistics indicate productivity increases of approximately 3 percent annually for the last 2 historical years (1983 and 1984). However, long-term average rates of increase show substantial variation depending upon the time period covered, the industries included, and the productivity measure used (multifactor productivity or labor productivity). Given the years of retrospective, cost-based reimbursement with attendant, negative incentives for productivity, a 1.0 percent productivity offset is conservative. It allows for most of productivity gains to accrue to the hospital industry.
b. Cost-effective Technologies Add-on.	+1.5	This is a target rate of increase that allows significant growth over time in cost-increasing, health-enhancing new technologies and scientific advances (as they affect operating expenses). This target rate of increase recognizes that long run historical intensity increases are not compatible with Medicare HI Trust Fund viability. By increasing productivity and eliminating ineffective practice patterns at rates higher than shown in this table, hospitals free up additional revenues. These revenues can be used to purchase additional technologies at a rate in excess of the 1.5 percent target rate of increase and/or to increase profit margins. Capital costs associated with new technologies continue to be reimbursed on a retrospective cost basis.
c. Ineffective Practice Patterns Offset.	−2.0	Ineffective practice patterns includes services which are more appropriately provided in lower cost settings and/or services that do not give value for money expended. Average length of stay for Medicare patients decreased 11.0 percent for hospitals in States with prospective payment in FY 1984. Physicians reduced outputs associated with this decline in average length presumably because they deemed that such outputs would not give value for the money expended and/or the outputs could more effectively be provided in a lower cost setting. If marginal cost is assumed to be 40 percent of average cost, then costs would be reduced 4.4 percent.
3. Composite increase	+3.35	

[1] The annual increase factors are added and subtracted to get the composite percent increase. The algebraic framework discussed earlier is multiplicative, rather than additive. The difference (due to interaction terms) is small. Since the additive framework is easier to understand for percent changes, it is suggested for use in this framework. The algebraic framework is presented in terms of costs per DRG, while this table shows percent changes for the various factors relative to the 1985 fiscal year DRG rate levels. The basic concepts inherent in the algebraic framework apply to this table of percent change factors.

E. Policy Target Adjustment Factors

Policy target adjustment factors include the effects of productivity, technology, and effectiveness on the DRG rate per discharge. They are termed policy target adjustment factors for two reasons: (1) they are extremely difficult, or perhaps impossible, to quantify individually with existing data sources, and (2) they are likely to be policy-determined variables reflecting targets, rather than historical experience.

Due to the extreme difficulty, or perhaps impossibility, of quantifying aggregate inputs and outputs in a conceptually meaningful way, we believe it is not currently possible to make precise empirical estimates for the individual factors of productivity, technology, and ineffective practice patterns. Existing studies sometimes report to have a measure or indicator for one of these three concepts, but inadvertently have some unknown mixture of all three. Interaction relationships inherent among the three factors suggest that individually setting target values for the three components is suggestive, at best, given current data limitations. Each individual hospital can best determine the mix of productivity increases, cost-effective technology add-ons, and ineffective practice pattern offsets to reach the desired target for the sum of the three factors. With this caveat in mind, we will now discuss the individual factors.

1. Productivity (Efficiency) Offset

Productivity improvements result in increases in output prices which are less than increases in the price of inputs (assuming constant profit margins and no change in the nature of outputs). In competitive industries, consumers benefit from increases in productivity by paying lower prices. Likewise, under the prospective payment system, increases in productivity should be reflected by lower DRG prices than would otherwise be the case. Sharing the cost savings from increased productivity provides desirable incentives for the prospective payment system.

While there does not appear to be a meaningful hospital industry-wide composite measure of hospital productivity, there have been numerous studies indicating that substantial gains can be made in hospital productivity.[5]

Process innovative technologies, which are associated with increased productivity and decreased operating cost, are included with the productivity offset factor—not with the technology add-on factor. Capital costs associated with the purchase of cost-decreasing technologies continue to be reimbursed on a retrospective cost basis. Decreased operating costs associated with the use of such cost-decreasing technologies can be used to finance quality-enhancing services.

2. Cost-Effective Technologies Add-on

Certain product innovative technologies and scientific advances (with accompanying labor and nonlabor inputs) are believed to increase the operating cost of treating illness, but result in a favorable ratio of benefits (improved health status) to operating costs. Such cost-effectiveness can be subjective and difficult (or, perhaps, impossible) to quantify in the aggregate.[6] It is the intent of the Federal regulations to include an add-on factor for such technologies and scientific advances. This cost-increasing, health-enhancing technology factor recognizes that, within bounds, HCFA should continue to provide positive incentives for technical and scientific excellence.

The impact of new technologies and scientific advances on operating cost and health status is very complex to isolate. Typically, a specific new technology increases operating costs in some uses and decreases operating costs in others. Concurrently, in some situations, health status is substantially improved, while in others it may have no affect or worsen health status. Separating out the relative importance of each of these effects for individual technologies and in the aggregate has proven to be illusive from a statistical point of view.[7] As mentioned previously, capital costs associated with the cost-effective technologies add-on currently covered by retrospective cost-based reimbursement.

3. Reduction of Ineffective Practice Patterns Offset

Some outputs per discharge are cost-ineffective in the sense that these outputs are more appropriately provided in lower cost settings and/or there is not value for monies expended.

Effectiveness compares a hospital's objective of improving health status with cost effective use of resources and gets at the question, "Are we doing the right things?" The elimination of selected diagnostic tests because their use does not improve health status and reductions in length of stay with no decrease in health status, are two examples of changes in practice patterns to improve cost effectiveness. Based on articles in the Summer 1984 *Health Affairs* journal, the experience under the prospective payment system, and other studies, retrospective, cost-based reimbursement encouraged the growth of ineffective practice patterns. Substantial savings can be achieved by reducing them.

For example, average length of stay for hospitals in States subject to the prospective payment system (that is, excluding hospitals in Maryland, Massachusetts, New Jersey, and New York which are paid under specially approved State systems) declined 11 percent in FY 1984.[8] Hospitals experience a reduction in costs associated with reductions in length of stay. For purposes of determining additional payments for day outlier cases, we have projected the marginal cost of an additional day of stay to be equal to 60 percent of the average per diem payment for the applicable DRG. (See § 412.82(c).) Assuming that this represents the ratio of marginal cost to average cost, the 11 percent reduction in length of stay would result in about a 6.6 percent reduction in cost per case. Of course, it can be argued that the marginal cost of an additional day of care may be significantly less than 60 percent of the average per diem cost. However, even if we assumed marginal costs to be only 40 percent of the average per diem cost, the FY 1984 reduction in length of stay would result in about a 4.4 percent reduction in cost per case. In addition to these considerations, we wish to point out that these probable reductions in costs do not reflect other changes in utilization of ancillary services, which have probably generated further reductions in the average cost per case under prospective payment.

4. Conclusion

We have set reasonable target rates of decrease or increase for each of the three factors (productivity, cost-effective outputs associated with new technologies and scientific advances, and cost-ineffective practice patterns). These target rates of change reflect a need to obtain a composite increase for the sum of three components that is reasonable and will provide incentives for desirable outcomes relating to quality of care, access to care, financial viability of hospital industry, and financial viability of Medicare Part A Trust Fund. The target rates of increase are intended to reflect judicious policy goals, rather than historical patterns.

The prospective payment system was intended to produce significant changes in the hospital industry. These forces of change need not conflict with each other. For example, productivity and cost-effectiveness need not compete with quality. Usually they are best pursued together. For example, practice patterns that minimize the potential for iatrogenic and nosocomial diseases

[5] See, for example, Stuart Altman and Joseph Eichenholz, "Control of Hospital Costs Under the Economic Stabilization Program," **Federal Register**, January 23, 1974, p. 2898; Applied Management Sciences, Inc., *Hospital Productivity—A Synopsis of the Literature*, Silver Spring, Maryland: Applied Management Sciences, DHHS Publication No. (HRA) 80-14028, August 1980; Applied Management Sciences, Inc., *Hospital Productivity—An Anotated Bibliography*, Silver Spring, Maryland: Applied Management Sciences, DHHS Publication No. (HRA) 80-14027, August 1980; Jerry Cromwell, "Productivity Trends in Short-Term General Non-teaching Hospitals," *Inquiry*, Vol. II, No. 3, September 1974, pp. 181–187; Paul L. Grimaldi and Julie A. Micheletti, *Prospective Payments: The Definitive Guide to Reimbursement*, Chicago, Illinois: Pluribus Press, Inc., 1985; David Sherman, "Hospital Efficiency Measurement and Evaluation: Empirical Test of a New Technique," *Medical Care*, October 1984, pp. 922–938.

[6] Kenneth E. Warner and Bryan R. Luce, *Cost-Benefit and Cost Effectiveness Analysis in Health Care: Principles, Practice, and Potential*, Ann Arbor, Michigan: Health Administration Press, 1982.

[7] Stuart Altman and Robert Blendon, Editors, *Medical Technology: The Culprit Behind Health Care Costs?* DHEW Publication No. (PHS) 79-3216, 1979; Office of Technology Assessment, *Diagnosis Related Groups (DRGs) and the Medicare Program: Implications for Medical Technology*, July 1983; Office of Technology Assessment, *Medical Technology and Costs of the Medicare Program*, July 1984.

[8] Bureau of Data Management and Strategy, "Short-Stay Hospital Admission Rates and Length of Stay Decreased Sharply in Fiscal Year 1984", *Health Care Spending Bulletin*, Health Care Financing Administration, No. 85-02, April 1985.

result in reduction of ineffective practice patterns, eliminate unnecessary costs, and directly contribute to improved health status. Also, under the prospective payment system, a hospital that improves productivity and reduces its costs per case has an opportunity for an improved margin of revenue over cost. This margin may be shared many ways, depending on the choice of the hospital, including expending a portion of it in ways that would improve quality.

As the concepts in our framework are modified to reflect improved understanding of the factors contributing to the DRG percent increase, and as relevant data become available, the DRG percent increase methodology will evolve to incorporate such changes.

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APPENDIX C

PROSPECTIVE PAYMENT ASSESSMENT COMMISSION

REPORT AND RECOMMENDATIONS TO THE SECRETARY, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

APRIL 1, 1985

—ProPAC—

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* The Report Appendix is not reprinted in the Federal Register

Executive Summary

In 1983 Congress enacted the most far reaching changes in the Medicare program since its establishment in 1965. Left behind was a cost reimbursement system that by general agreement had produced unacceptable hospital cost inflation. Congress mandated that the inpatient hospital care rendered Medicare beneficiaries would henceforth be paid on the basis of a prospective payment per case, using diagnosis-related groups (DRGs) to classify and label the hospital product being purchased.

This report is the product of the congressionally-established Prospective Payment Assessment Commission, fifteen individuals knowledgeable about the health industry who were vested with the responsibility of analyzing the new prospective payment system (PPS) and advising the Secretary of the Department of Health and Human Services and the Congress on ways of improving it. The recommendations emanate from a profound concern that the fundamental changes introduced October 1, 1983 be implemented in as fair, cost-effective, and quality-enhancing a manner as possible.

The Commission, which began meeting in December 1983, has focused its attention on two major questions:

1. By what percentage should Medicare's payments for hospital discharges in fiscal year 1986 increase or decrease (the "Update Factor")?
2. What changes, if any, should be made concerning payments to hospitals for specific treatments or procedures by the Medicare program (adjustments of DRG classifications and weights)?

The body of this report and accompanying technical appendixes explain the Commission's actions and decisions in substantial and technical detail. For purposes of this summary, six major points should be emphasized:

- The Commission's unanimous recommendations reflect five major priorities: maintaining access to high-quality health care; encouraging hospital productivity and long-term cost-effectiveness; facilitating innovation and appropriate technological change; maintaining stability for providers, consumers, and other payers; and basing decisions upon reliable and timely data and information.

- The Commission recommends that next year's Medicare hospital payments incorporate inflation in hospital input prices and higher costs due to treating sicker patients, minus one percentage point. This recommendation would result in payment increases significantly less than those of recent years. The inflation minus one percentage point represents the Commission's best judgment as to the net change in payments needed to provide scientific and technological advances in the hospital industry, balanced by changes in hospital productivity and in the hospital product. In particular, the Commission's calculations reflect a judgment and belief that appropriate, sustained, and necessary technological growth in the health care industry can be achieved in part by savings generated through improvements in hospital productivity.

- The Commission recommends action on two problems arising from PPS implementation. Specifically, the Commission urges the Secretary of the Department of Health and Human Services to move quickly to improve the current definition of hospital labor market areas, in order to better adjust PPS rates for area wage differences. The Commission also urges the Secretary to institute adjustments for hospitals that incur higher Medicare costs per case associated with treating a greater proportion of low income patients ("disproportionate share hospitals").

- For fiscal year 1986, the Commission recommends adjusting all of the DRG weights using newer, more complete, and more accurate data. Such adjustment or "recalibration" is intended to enable PPS to reflect changes in hospital practice during recent years. As part of the recalibration process, the weights should also be adjusted to avoid building changes in coding practice into future PPS

payments. The Commission's recommendations incorporate its review of a number of specific medical practices and technologies. Additional data collection and analysis regarding other such practices and technologies are required in order to reach well-informed conclusions.

- While making no recommendation at this time on the pace of transition to national payment rates, the Commission is aware of concerns that have arisen regarding the impact of that transition on different hospitals and regions. The transition issue involves weighing the desirability of continued implementation of a system already clearly yielding positive results, against the possible harms of delaying that transition to correct PPS inequities and shortcomings. The Commission will continue to analyze this important issue.
- The Commission offers its analysis and recommendations in an environment of debate concerning future directions in health care delivery and financing. The recommendations themselves are predicated on continued implementation of the current PPS system. They seek to address as sensibly as possible the tension among several compelling and competing considerations: Federal budgetary constraints; maintenance of Medicare beneficiaries' access to high-quality care; and changes in the hospital industry. Should any health policy proposals affecting PPS be adopted, the Commission will respond with appropriate analytical work.

The report that follows is by design and necessity a technical document. The Commission issuing it, however, remains mindful of the fact that the report's analysis, discussion, and recommendations will directly affect millions of Medicare beneficiaries—individuals for whom the pluses and minuses of the "Update Factor" will translate into a significant impact on the kind of life-giving treatment they receive.

OVERVIEW OF THE COMMISSION'S RECOMMENDATIONS

The Commission's 21 recommendations fall into two major categories: recommendations regarding the update factor and recommendations regarding adjustments of DRG classifications and weights.

The first 16 recommendations address the update factor. In recommendation 1, the Commission proposes updating the standardized amount by the projected increase in the hospital market basket, minus one percentage point, plus an allowance for the estimated increase in real case-mix complexity during fiscal year 1985. Several of the first 16 recommendations involve specific market basket issues, including the desirable number of such market baskets, wage components, and correction of forecast errors.

Recommendations 13 through 15 address distributional concerns. The Commission selected the definition of hospital labor market areas and disproportionate share hospitals as two problem areas of PPS deserving immediate attention in the establishment of the fiscal year 1986 payment rates. This does not imply that other problem areas are not also of great importance, but the Commission believes that the distributional consequences of these two problems are sufficiently severe, and the potential for finding workable solutions is sufficiently high, that immediate attention is warranted.

Recommendation 17 recommends recalibration of the DRG weights with a data base that is newer, more complete, and more accurate than the 1981 data used to create the current DRG weights. The Commission's recommendation reflects its belief that, because of potential inaccuracies in the data originally used to establish the DRG weights and changes in hospital practice patterns since 1981, a full recalibration for the 1986 rates is advisable.

Recommendations 18 through 20 pertain to specific DRG weight, classification, and assignment issues concerning three procedures: pacemaker implantation; cataract extraction and intraocular

lens implantation; and percutaneous transluminal coronary angioplasty. Recommendation 21 concludes that two additional procedures, bone marrow transplantation and treatment of infective endocarditis, do not require in-depth analysis at this time.

The Commission will make future recommendations concerning these and many other DRG weight, classification, and assignment issues, as new information becomes available.

THE COMMISSION'S FUTURE AGENDA

While much has been accomplished during the Commission's first year, many important PPS-related issues require further evaluation. The Commission looks forward to analyzing a variety of complex matters including:

- The measurement of case mix used for PPS and evaluation of alternative case-mix systems.
- Improvement in the methods used to account for resources consumed during specific types of hospital stays. Special emphasis will be placed on analyzing the allocation of nursing costs to DRGs.
- PPS payment policies, with emphasis on adjustments for differing costs of hospitals serving large numbers of low income patients, definitions of hospital market areas, and effects of the transition to national payment rates.
- System responsiveness to changes in practice patterns, focusing on payment mechanisms for new or changing technologies. In addition, a number of specific diagnostic and therapeutic practices are currently being examined:
  - —Cyclosporine used in renal transplantation
  - —Magnetic resonance imaging
  - —Dual joint procedures in one hospitalization
  - —Treatment for alcohol dependence
  - —Cochlear implants
  - —Extracorporeal shock wave lithotripsy
  - —Dermatologic disorders
- The effects of PPS on health care delivery, such as changes in quality of care and health outcomes, changes in types of patients treated in hospitals, changes in the hospital product, and regional practice pattern variations.

STRUCTURE OF THE REPORT AND APPENDIXES

The Commission's report consists of two volumes. In this volume, the Commission's first chapter presents background information concerning establishment of the prospective payment system. Chapter 2 identifies the major priorities and approaches underlying the Commission's recommendations. The recommendations themselves, along with explanatory material, appear in Chapter 3. The fourth and final chapter of the first volume explores areas and issues requiring substantial Commission attention in the year and years to come.

In developing its recommendations the Commission considered staff analyses and the views of numerous technical experts. The purpose of volume 2—the Technical Appendixes—is to present much of this background material to afford greater insight into the Commission's decisions.

The appendixes consist of both descriptive and analytical pieces covering the origins of the prospective payment system, the determination of prospective payments, the update factor, and DRG recalibration. They underscore many of the dilemmas and issues confronting the Commission during its deliberations.

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LIST OF RECOMMENDATIONS

The Update Factor

Recommendation 1: Amount of the Update Factor

For fiscal year 1986, the standardized amounts should be updated by the projected increase in the hospital market basket, minus one percentage point, plus an allowance for the estimated increase in real case-mix complexity during fiscal year 1985. The negative one percentage point is a combined adjustment of a positive allowance for scientific and technological advancement and a negative allowance for productivity improvement and hospital product change.

This recommendation reflects the Commission's collective judgment of the appropriate increase in the level of payment per Medicare discharge under PPS, assuming that the Commission's other concerns regarding the market basket component of the update factor, the DRG weighting factors, and the distribution of payments across PPS hospitals are also addressed in the fiscal year 1986 payment rates. Further, this recommendation is based on the premise that no net reductions or increases in average per case payments to hospitals will be effected through measures other than the update factor, such as reducing the indirect teaching adjustment, incorporating capital payment under PPS at a budget-saving level, adjusting for coding changes occurring before fiscal year 1985, or any other changes in total payments per discharge under PPS.

The Hospital Market Basket

Recommendation 2: The Number of Market Baskets

For fiscal year 1986, a single market basket should be continued for those hospitals under PPS. The Commission will undertake a study to determine the appropriateness of developing market basket measures that reflect variation in economic factors across hospitals. The use of multiple market baskets by region and classes of hospitals within regions will be examined. If the analysis indicates that multiple market baskets are appropriate, the study will also include an assessment of the data required for implementation.

Recommendation 3: Market Basket for Psychiatric, Rehabilitation, and Long-Term Care Hospitals

Separate market basket weights should be used for the group of psychiatric, rehabilitation, and long-term care hospitals and related distinct-part units that are exempt from PPS, but subject to the TEFRA rate of increase limitation. Separate market basket weights need not be developed for children's hospitals.

Recommendation 4: Market Basket Wage Component—Occupational Groups

The wage component of the market basket should be split into three categories, each with separate weights: Managers and Administrators, Professionals and Technicians, and Other Hospital Workers. Changes in wages for these categories should be measured as follows:

- Managers and Administrators: the Employment Cost Index (ECI) for Managers and Administrators.
- Professionals and Technicians: a 50-50 blend of the Average Hourly Earnings (AHE) for the hospital industry and the ECI for Professionals and Technicians.
- Other Hospital Workers: a 50-50 blend of the AHE for the hospital industry and the ECI for all private industry.

Recommendation 5: Employment Cost Index Feasibility Study

For the long run, the Secretary should work with the Bureau of Labor Statistics to study the advantages and feasibility of developing an Employment Cost Index for the hospital industry that includes both public and private hospitals and covers increases in both wages and fringe benefits.

Recommendation 6: Study Effects of Changes in the Minimum Wage Law on Hospital Workers

The Commission plans to study the extent to which hospital workers would be affected by changes in the Federal minimum wage law. The intent of the study is to detect whether, under PPS, workers who earn more than the minimum

wage are differentially affected by statutory increases in the minimum wage compared with workers in other industries. If a differential effect is found to exist, the Commission will consider requesting the Secretary to take appropriate action.

Recommendation 7: Correction of Market Basket Forecast Errors

The update factor should include a correction for substantial errors made in the previous year's forecast of changes in the external price measures used in the hospital market basket. In the judgment of the Commission, substantial errors are those that equal or exceed 0.25 percentage points (or, when rounded in the published forecasts, 0.3 percentage points). The Commission will undertake a study to determine the extent to which differences between forecasted and actual increases in the internal price change measures are due to factors beyond the hospitals' control. Substantial errors determined after study to be due to factors beyond the hospitals' control should be corrected in the update factor.

Recommendation 8: Statutory Change for Forecast Error Correction

The Secretary has determined that she does not have the statutory authority to correct for market basket forecast errors. Therefore, the Secretary should seek statutory change to provide explicitly that the update factor include a correction for errors in forecasting the market basket beginning in fiscal year 1986.

Recommendation 9: Rebasing of Market Basket Weights

Market basket weights should be rebased at least every five years. Rebasing should be performed more frequently if significant changes in the weights occur. In addition, the market basket weights will need to be rebased if payment for capital or direct medical education is included in the PPS rates.

Discretionary Adjustment Factor

Recommendation 10: Allowance for Productivity and Scientific and Technological Advancement Goals

For the fiscal year 1986 payment rates, the allowance in the discretionary adjustment factor for scientific and technological advancement, productivity improvement, and hospital product change should be set at minus one percentage point.

Recommendation 11: Adjustment for Case-Mix Change

Prospective payments to individual hospitals and in the aggregate should reflect real changes in case mix. Changes in reported case mix that are unrelated to actual differences in the types of patients treated should not be built into future PPS payments.

Recommendation 12: Update Factor for Exempt Hospitals

In addition to the projected increase in the market basket, hospitals and hospital distinct-part units exempt from PPS should receive a minus one percentage point adjustment in their fiscal year 1986 update factor for productivity improvement and scientific and technological advancement.

Hospital Labor Market Areas—Area Wage Index

Recommendation 13: Improvement of Labor Market Area Definitions

In order to better reflect hospital labor markets, the Secretary should improve, as soon as possible, the current definition of a hospital labor market area used to adjust PPS rates for area wage differences, taking into account variations in wages paid in the inner city compared with suburban areas within a metropolitan area, and variations paid in different rural locations within a state. Implementation of this recommendation should not result in any change in aggregate payments.

Disproportionate Share Hospitals

Recommendation 14: Disproportionate Share Adjustment for Fiscal Year 1986

The Secretary should develop a methodology for adjusting PPS rates for disproportionate share hospitals and implement the adjustment in fiscal year 1986. The adjustment should be implemented so that it does not change aggregate payments.

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Recommendation 15: Definition of Disproportionate Share Hospitals

The Secretary should complete the development of a definition of disproportionate share hospitals in ample time to include adjustments for these hospitals in the fiscal year 1986 PPS payment rates. The Secretary should consider broader definitions of low income than simply the percentage of patients who are Medicaid recipients and should determine whether the share of Medicare Part A patients should be excluded from the definition.

Rebasing the Standardized Amounts

Recommendation 16: Rebasing the Standardized Amounts

The standardized amounts used to determine hospital payments under PPS should be recalculated using cost data that reflect hospital behavior under PPS. The results of such a recalculation, with appropriate modifications, could be used to rebase the standardized amounts. Although recent cost data are not available to recalculate the standardized amounts for the fiscal year 1986 payment rates, the Secretary should implement a process for timely collection of the cost data necessary for future recalculation. The Commission will later consider more specific recommendations regarding the timing, data sources, and process for rebasing the standardized amounts.

DRG Classifications and Relative Weighting Factors

Recommendation 17: Recalibrating the DRG Weights

For fiscal year 1986, all DRG weights should be recalibrated using the 1984 PATBILL data set. The newly recalibrated weights should be:

(1) Normalized so that the average case weight is the same as it was at the beginning of fiscal year 1985, thereby incorporating DRG weight adjustments made before the start of fiscal year 1985

(2) Adjusted for any demonstrable changes in reported case mix occurring during fiscal year 1985

Recommendation 18: Cardiac Pacemaker Implantation

The DRGs involving cardiac pacemakers, DRGs 115, 116, 117, and 118, should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981. The Commission will continue to analyze diagnosis and procedure coding and DRG classification related to pacemaker implantation and replacement; the distribution of costs and payments across discharges, hospitals, and DRGs; and the impact of PPS on the quality of patient care.

Recommendation 19: Cataract Extraction and Intraocular Lens Implantation

DRG 39, Lens Procedures, should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981, including the more frequent implantation of an intraocular lens following cataract removal. The Commission will continue to monitor resource use in this DRG to determine whether the types of patients treated as hospital inpatients change with increased outpatient surgery for cataract removal.

Recommendation 20: Percutaneous Transluminal Coronary Angioplasty

Cases in which Percutaneous Transluminal Coronary Angioplasty (PTCA) is the principal procedure should be removed from DRG 108 and temporarily assigned to DRG 112 before recalibration. The Secretary should immediately implement a mechanism to identify bills for cases in which PTCA is performed in order to provide data for analysis and additional adjustments as appropriate.

Recommendation 21: No Change Recommended for Bone Marrow Transplantation and Infective Endocarditis

The Commission has examined Bone Marrow Transplantation and Treatment for Infective Endocarditis and is recommending no changes in DRG classification or weights at this time, other than those that would occur with recalibration. Information will continue to be gathered and the subjects reconsidered at an appropriate time.

Chapter 1

Introduction and Background

The Medicare prospective payment system (PPS) for payment of inpatient hospital services was enacted by the Social Security Amendments of 1983 (Pub. L. 98-21). Accompanying this new payment system, the Congress created the Prospective Payment Assessment Commission (ProPAC) to advise the executive and legislative branches on maintaining and updating PPS.

This report contains the Prospective Payment Assessment Commission's recommendations to the Secretary of the Department of Health and Human Services (HHS) for updating and modifying Medicare's prospective payment system for inpatient hospital care. This chapter describes the Commission's role and responsibilities and summarizes historical trends in national health care expenditures that preceded the adoption of PPS. It also explains measures adopted to restrain the growth of Medicare hospital expenditures, including the development and operation of PPS. Chapter 2 states the priorities that guided the Commission in reaching its recommendations and that will be considered by the Commission in the future. The Commission's recommendations are presented in Chapter 3, and Chapter 4 specifies areas for further study and consideration.

THE PROSPECTIVE PAYMENT ASSESSMENT COMMISSION: ITS ROLE AND RESPONSIBILITIES

The prospective payment system significantly changed the Medicare program's method of payment for inpatient hospital care provided to Medicare beneficiaries. At the time of enactment, the Congress created a permanent, independent commission with responsibilities related to maintaining and updating this new system. The Prospective Payment Assessment Commission was established with 15 members appointed by the Director of the Office of Technology Assessment, Congress of the United States. Members are selected, as required by the law, to provide independent expertise and experience in health care delivery, financing, and research. (Biographies of current Commission members appear in this report's appendix.)

Commission Mandate

The Congress intends the Commission to be a highly knowledgeable, independent panel. The Commission's role is to advise the executive and legislative branches on PPS and to provide analysis necessary to maintain and update the system. This report fulfills the Commission's two primary responsibilities mandated by Pub. L. 98-21. These are to:

- Recommend annually to the Secretary of the Department of Health and Human Services the appropriate percentage change in the Medicare payments for inpatient hospital care, called the "update factor," which is applied to the previous year's payment rates.
- Consult with and recommend to the Secretary of the Department of Health and Human Services necessary changes in diagnosis-related groups (DRGs), including advice about establishing new DRGs, modifying existing DRGs, and changing the relative weights of the DRGs.

In addition, the Commission will report to the Congress its evaluation of adjustments made by the Secretary of the Department of Health and Human Services to DRG classifications and weights, as required by Pub. L. 98-21. The Secretary is required to make such adjustments at least every four years, beginning with fiscal year 1986.

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The Commission will prepare reports to the Congress appropriate and necessary to meet its mandate to update PPS and to analyze and evaluate adjustments to the system. Finally, the Commission will annually report to the Congress on the overall effects of PPS on the delivery and financing of the nation's health care and prepare other reports that the Congress may request. The Commission's review of inpatient hospital payments for pacemaker implantation, required by the Deficit Reduction Act of 1984, was transmitted to the Senate Finance Committee and the House Ways and Means Committtee on March 1, 1985 (see Technical Appendix D).

Commission Processes and Policies

The Commission has a policy of open meetings and solicits comment and involvement from groups or people with information relevant to its responsibilities. A notice describing the process for interested parties to submit information to the Commission has been published in the *Federal Register* (50 Fed. Reg. 1657 [1985]). The policies and procedures adopted by the Commission for conducting business in a manner consistent with the law appear in this report's appendix.

The Commission members were appointed in November 1983 and held their initial meeting in December 1983. Early in 1984, the Commission selected an Executive Director who began hiring staff, securing office space and supplies, establishing liaison with governmental and private sector organizations, and developing analytic systems to support the work of the Commission. Partial year funding of $1.5 million was appropriated for the Commission's work during the period covering fiscal year 1984. A full-funding request of $3.2 million (including unexpended carryover funds from fiscal year 1984) was appropriated by the Congress for ProPAC's first full year of operation, fiscal year 1985.

The Commission prepared this initial report while hospitals were in the early phases of payment under PPS. While the report contains specific recommendations for immediate consideration and implementation, the Commission views its role and responsibilities in a long-term context. The Commission's priorities and activities, as described in the remaining chapters, are intended to both correct technical deficiencies in the system and develop more fundamental improvements.

THE CHANGING HEALTH CARE ENVIRONMENT

The Commission undertakes its responsibilities at a time of significant change in the organization, delivery, and financing of health care services. Medicare's prospective payment system parallels private-sector efforts to increase efficiency in the delivery of health care. New financial incentives encourage providers to reduce costs by curtailing the provision of services with limited benefit and delivering services in lower-cost settings. At the same time, advances in technology have made it possible to shift services from hospitals to ambulatory settings and patients' homes.

Significant change in the delivery of health care services was motivated, in part, by rapidly growing health care expenditures during the last two decades. The increase in national health care spending followed the expansion of public and private health insurance coverage. In general, the policies of third-party payers emphasized inpatient hospital care and frequently reimbursed providers on the basis of their costs. Increased financial access to health care, especially hospital care, and greater use of services for large numbers of persons inevitably resulted in increased public and private spending. Further, cost-based reimbursement lacked incentives to provide care in the most efficient manner or balance the cost of additional care with expected improvements in health status.

National Health Care Expenditure Growth

National health care expenditures rose from $35.9 billion in 1965 to $355.4 billion in 1983. This tenfold rise in health care spending outpaced the

growth of the general economy. As a result, national health expenditures accounted for 10.8 percent of gross national product (GNP) in 1983, whereas in 1965, they accounted for only about 3.9 percent of GNP.

The increased spending between 1965 and 1983 can be attributed to three interacting factors:

- Increased input prices, the higher prices paid for the resources used to produce medical care services, account for about 62 percent of the increased spending.
- Greater use of services, for example more physician visits per capita, and greater intensity, such as additional diagnostic tests per hospital admission, together explain about 30 percent of the increase.
- Increased population accounts for about 8 percent of the increase.

Medicare expenditures rose from $7.1 billion in fiscal year 1970 to $65.0 billion in fiscal year 1984, reflecting overall health care spending growth. Outlays from the hospital insurance (HI) Trust Fund for inpatient hospital care increased from $4.2 billion in fiscal year 1970 to $39.7 billion in fiscal year 1984. In the same period, expenditures for supplemental medical insurance (SMI), which pays for physicians' services and other outpatient services, rose from $2.2 billion to $20.4 billion.

Responses to Increased Health Care Spending

Faced with unprecedented deficits in recent years, the Federal government has attempted to purchase services more prudently and has encouraged greater competition in the health sector. In addition to hospital prospective payment, Medicare expanded availability of coverage for care in risk-based competitive medical plans (CMPs) and health maintenance organizations (HMOs). New ambulatory surgery and hospice benefits were added and changes were made in payment policy for dialysis, clinical laboratories, and other services. Many states also have implemented changes, including adopting their own prospective payment systems and contracting with providers for services in their Medicaid programs.

In addition to governmental efforts, business and labor have become active participants in controlling health care costs. They often have cooperated in the redesign of health benefits, emphasizing ambulatory over inpatient care, effective hospital utilization review, preadmission certification of necessity, and surgical second-opinion programs. Many employers have increased employee cost-sharing and others have become cost-conscious health care buyers, often choosing to self-insure the risk of providing health benefits for employees.

Both the public and private sector have supported alternative delivery and financing arrangements. The portion of the population enrolled in HMOs rose from 3 to 6 percent between 1975 and 1984; enrollment increased by more than 20 percent between 1983 and 1984. The interest in alternative delivery systems also led to the development of new arrangements, such as preferred provider organizations (PPOs). Through PPOs, firms and business coalitions have negotiated discounts for health care provided to their employees.

In addition to changes in financial incentives, other significant changes will influence the direction of health care spending in the next decade. For example, the supply of active physicians has risen substantially during the 1970s and will continue to expand rapidly. By 1990, the nation's supply of active physicians will be one-third larger than it was in 1980. Increases in numbers of physicians have encouraged the development of new forms of health care financing and delivery, but the effect of the increased physician supply on total health care expenditures over the next decade is uncertain.

There are also subtle changes in public attitudes toward health maintenance and health care, with increasing numbers of people taking a more active role in maintaining and improving their state of health through "wellness" programs that include changes in life-style, such as increased physical exercise, reduced cigarette smoking, and modified diet. Faced with a growing amount of cost-sharing, consumers are also beginning to seek out

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less costly, more convenient, and often more personal alternative health care providers. The movement from the hospital to ambulatory settings for surgery and other services has been generally accepted. Nevertheless, the public places a priority on high-quality health care, including access to sophisticated diagnostic and treatment services usually available only in the hospital.

MEDICARE HOSPITAL REIMBURSEMENT AND THE DEVELOPMENT OF PROSPECTIVE PAYMENT

The adoption of the prospective payment system followed the recognition that retrospective, cost-based reimbursement did not sufficiently encourage efficiency and concern for costs. In the years preceding enactment of PPS, prospective limits were applied to routine inpatient hospital costs to restrain increasing Medicare outlays. In the year immediately prior to enactment of PPS, limits were extended to all inpatient operating costs. As an incentive for efficient delivery of health care, hospitals were rewarded if their costs were below these limits.

Reasonable Cost Reimbursement

The Congress balanced many political, structural, and policy interests in the enactment of Medicare in 1965. In the area of payment for inpatient hospital care, the choice was between paying hospital charges or the "reasonable costs" associated with care for beneficiaries. The Congress selected the latter approach because it was considered fair to hospitals and ensured access to hospital services for beneficiaries.

Extensive administrative regulations and operating instructions defined reasonable costs and detailed methods for determining them. These regulations and instructions changed many times over the years in an attempt to keep them current with hospital practices and to more accurately reflect reasonable costs. Cost determination was retrospective and used complex allocation formulas to separate the costs of Medicare beneficiaries' care from a hospital's total costs. Despite this complexity, however, the system responded to hospital cost increases simply by providing increased reimbursement—the greater a hospital's costs, the greater was its Medicare reimbursement.

Development of Prospective Reimbursement Approaches

As early as 1967, the Congress recognized that the retrospective, reasonable cost reimbursement system lacked incentives for hospitals to hold down costs. The Social Security Amendments of 1967 directed Medicare to experiment with different reimbursement methods and, in particular, called for "incentive reimbursement" studies. These studies had limited usefulness, however, because hospital participation was voluntary.

In the 1972 Social Security Act Amendments, the Congress enacted much broader experimental authority directing Medicare to proceed with prospective payment experiments and demonstrations. The amendments encouraged states to develop alternative hospital reimbursement methods by allowing Medicare to grant waivers that permitted Medicare's hospital reimbursement to be governed by a state's rate-setting program. In describing this new authority, congressional committee reports stressed the need for incentives in the system to moderate health expenditure growth.

The foundation for prospective hospital reimbursement was broadened by Section 223 of the Social Security Amendments of 1972, which authorized HHS to set prospective limits on costs. Under this authority, the Department set limits on routine per-diem hospital inpatient operating costs. At that time, the absence of good case-mix measures prevented applying limits to special care and ancillary costs. The Congress continued to move toward prospective payment for Medicare services in the 1978 End Stage Renal Disease Amendments which, for the first time, prospec-

tively set payment rates for a Medicare service, outpatient dialysis. The 1978-79 debate over hospital cost containment increased understanding of the problems of hospital payment and fostered a consensus that retrospective cost reimbursement should be replaced.

During this period, HHS began a comprehensive program of research, experimentation, analysis, and evaluation of prospective hospital reimbursement methods to support Medicare cost control measures. A key element in the research and experimental work was the recognition that any prospective system would require recognition of a hospital's case mix. Because different hospitals treat different kinds of patients and cases, a major equity issue was how to compensate hospitals adequately when the resources required differed for the care of patients with different conditions. The development of a technically acceptable case-mix measure was, therefore, a critical step in the development of approaches to prospective payment.

In the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), the Congress expanded the existing prospective cost limits from routine to total inpatient operating costs and required that these costs be adjusted by a case-mix measure. The use of total cost per-case limits was possible because a workable case-mix measure was developed in the late 1970s following work at Yale University in the development and refinement of diagnosis-related groups. Although the system remained retrospective and based on costs, it established additional cost-limitation incentives. Payment for inpatient hospital services was based on the relationship between a hospital's costs and a ceiling determined by a target rate of increase in operating costs per case. If a hospital incurred allowable costs per case below the target amount, it was paid its costs plus a certain percentage of the difference. If a hospital incurred allowable costs per case above the target amount, however, it was to have been paid the target amount plus, in 1983 and 1984 only, one-quarter of the excess cost.

The penalty and bonus concept embodied in TEFRA, designed to encourage hospital efficiency, represented a significant step toward the system of prospective payment eventually adopted. The Congress required the Department of Health and Human Services to develop a full prospective payment proposal for congressional consideration by the end of 1982. This deadline was met, and the resulting proposal, as modified by the Congress, became the current PPS.

MEDICARE'S PROSPECTIVE PAYMENT SYSTEM

Medicare's prospective payment system, enacted in April 1983, incorporated several objectives:

- Ease of understanding and simplicity of administration and implementation,
- Predictability of payment for hospitals and the Federal government,
- Establishment of the Federal government as a prudent purchaser of services,
- Reduction of administrative burdens on hospitals,
- Provision of rewards for efficient operation, and
- Limitation on beneficiary liability only to those coinsurance and deductible amounts previously mandated by the Congress.

Development of Diagnosis-Related Groups for Case-Mix Measurement

The DRGs used in PPS were developed at Yale University to measure case mix and were modified and refined over a period of more than 12 years. There were several constraints on developing the case-mix measure eventually used in PPS. The most important was the complete reliance on the limited information contained on the uniform hospital discharge data set (UHDDS).

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DRGs measure the output of a hospital by classifying patients into 23 groups, called major diagnostic categories (MDCs). These groups are based on the major human body systems. The 23 MDCs are further divided by other factors, including diagnostic or surgical procedure used and the patient's age, sex, and other clinical service information. This results in 467 individual DRGs. (One additional DRG, number 468, is used in PPS for payment purposes for cases in which the principal diagnosis and the principal surgical treatment procedure do not logically "match.")

Development of Payment Amounts

Following a congressionally mandated outline, the Health Care Financing Administration (HCFA) established initial payment levels for each DRG based on 1981 cost and charge data. The initial year rates, for fiscal year 1984, were updated for fiscal year 1985 in a final regulation published August 31, 1984. ProPAC is required to make recommendations for updating payment levels for fiscal year 1986 and beyond.

Although several additional factors affect the final payment amount, the prospective payment for each discharge can be generally described by the following formula:

Standardized Amount × DRG Weight = Payment Per Discharge

There are eight primary features of hospital payments:

1. There are 20 standardized amounts, one urban and one rural amount for each of the nine Census Divisions and for the U.S. as a whole. These standardized amounts are adjusted for area wages, outlier payments, and indirect medical education payments. The current standardized amounts and the DRG weights were constructed from 1981 hospital cost report data and from Medicare inpatient bill charge data.

2. Certain hospital costs continue to be reimbursed on a cost basis and, thus, were excluded from the costs that were used as the basis for the prospective payments. These excluded costs include:
   - Direct medical education costs,
   - Capital-related costs,
   - Kidney acquisition costs,
   - Services of nonphysician anesthetists (for fiscal years 1985-1987), and
   - Medicare bad debt.

3. Additional payments are made under certain circumstances for:
   - Indirect medical education,
   - Unusually costly or long-stay (outlier) cases, and
   - Hospitals serving a high proportion of dialysis patients (starting in fiscal year 1985).

4. Payment amounts are adjusted annually by an update factor composed of the market basket (the price of goods and services purchased by hospitals) and an additional "discretionary adjustment factor" (DAF). The DAF accounts for changes in hospital productivity, technological and scientific advances, quality of health care, and long-term cost-effectiveness of services provided. Originally, the Congress set the DAF at one percentage point. Subsequently, the Deficit Reduction Act of 1984 limited the DAF to .025 percent in fiscal year 1985 and not more than .025 percent in fiscal year 1986.

5. In fiscal years 1984 and 1985, there was a statutory constraint that payments under the prospective payment system must equal the payments that would have been made if prospective payment had not been enacted. This requirement is referred to as "budget neutrality."

6. The prospective payment system is to be phased in over three years. During the first year, three-quarters of the hospital's payment is based on its own cost experience. In the subsequent two years, this percentage falls to one-half, and then one-quarter. The "Federal standardized amount " is based on Census Division averages in fiscal year 1984 and a blend of Census Division and national payments in the next two years. Separate payment amounts are used for rural and urban hospitals. In the fourth year, the entire payment will be based on national urban or rural standardized amounts.

7. To determine the amount each hospital is paid, the regional and national standardized

amounts are adjusted by a wage index to reflect differences in hospital wage levels around the country. Each urban area has its own wage index, and all rural areas in a state use a single wage index.

8. The prospective payment law provides for a number of exemptions, exceptions, and adjustments for groups of hospitals. Exemptions are provided for children's hospitals, long-term care hospitals, rehabilitation hospitals and units, psychiatric hospitals and units, Federal hospitals, alcohol and drug abuse hospitals and units (for fiscal years 1984 and 1985), and hospitals in states with approved alternate hospital reimbursement systems. Exceptions and adjustments are provided for sole community hospitals, hospitals devoted primarily to cancer treatment and research, and rural referral centers.

Adjustments for Changes in Case Mix

As one of the adjustments used to satisfy the requirement of budget neutrality, the initial PPS standardized amounts were lowered to account for the increases in case-mix complexity which were expected to occur under PPS. The HCFA actuaries used data compiled by the Professional Standards Review Organizations (PSROs) across the nation to estimate this expected change. These data indicated that DRG weights would be 3.38 percent higher when more complete diagnosis and procedure information was submitted. As a result, the standardized amounts for the first year of PPS were lowered to reflect the expected increase.

Experience during the first year of PPS (fiscal year 1984) indicated that DRG weights had increased considerably more than the 3.38 percent predicted by the PSRO data. Under the requirement of budget neutrality, the PPS payments for fiscal year 1985 needed to be lowered to offset this increase by either again lowering the standardized amounts or lowering all the DRG weights. A decision was made to lower all DRG weights for fiscal year 1985 by 1.05 percent (described in Technical Appendix A).

Chapter 2

Overall Approaches and Priorities of the Commission

The Commission believes that the Medicare prospective payment system will have an impact on hospitals and the American health care system that extends beyond the impact on Medicare beneficiaries. Thus, the Commission's recommendations should be viewed in the context of a rapidly evolving health care system with PPS one significant part of the change.

In moving from cost-based reimbursement to the setting of a price in advance for the care of an individual patient, the prospective payment system significantly alters the incentives to hospitals. The Commission supports the incentives in PPS to increase hospital productivity and cost-effectiveness. The Commission also believes, however, that access to high-quality care must be maintained for Medicare patients.

Preliminary evidence suggests that hospitals are responding to PPS incentives, but it is too early to draw unequivocal conclusions regarding the overall positive or negative impact on the health care of Medicare beneficiaries. Nevertheless, the Commission is optimistic about the success of PPS and its recommendations are directed to improvements necessary to ensure continued success. Ongoing analysis and monitoring using more complete information is also necessary.

The following set of cross-cutting priorities has guided the Commission in the development of the recommendations in this first report. The Commission anticipates that in the future these priorities will continue to govern its recommendations concerning updating the payment rates and modification of the DRG classifications and weights.

MAINTAINING ACCESS TO HIGH-QUALITY HEALTH CARE

The maintenance of quality of care is a paramount concern of the Commission. The Commission is keenly aware that the financial incentives of the prospective payment system may lead hospitals to lower their costs of providing services in a variety of ways, some of which may potentially compromise the quality of care provided to Medicare beneficiaries. With its altered financial incentives for hospitals, the system creates the challenge of maintaining quality health care while restraining health care costs. Hospitals which are paid a fixed amount per type of case by Medicare and other payers (who adopt PPS or use other competitive strategies such as preferred provider organizations) can no longer be indifferent to the resources expended in patient care. PPS encourages a reduction of hospital inputs—tests, special procedures, supplies, equipment, personnel time, and hospital days—because hospitals can lower their costs only by controlling resources devoted to inpatient stays. Clearly, as the increase in hospital spending is slowed and cost savings are realized, the need to develop methods to detect adverse effects on quality and access is intensified.

The Commission strongly perceives its role as supporting the establishment of payment rates that will enable hospitals to continue to deliver high-quality health care. The DRG classifications and weights must be modified appropriately to reflect changes in medical practice. Similarly, the update factor must be adequate to enable hospitals to expend the resources required to maintain the appropriate amount and type of care.

The Commission believes that it would be unacceptable for quality to be assessed only in terms of maintaining past practices. Innovation and the adoption of new technologies shown to be safe

and effective must not be constrained inappropriately by PPS, for this would also constitute an erosion of quality. The Commission recognizes, however, that the resources that can be devoted to health care are finite and that changes in practice patterns must be carefully weighed against the costs of care.

The Commission will remain informed about the quality of care given under the prospective payment system. Recognizing that the Peer Review Organizations (PROs) have been given primary responsibility to monitor Medicare quality of care, the Commission will follow the PROs' progress in performing this crucial task. The Commission will also review and use the studies on quality of care being conducted by the Health Care Financing Administration, as well as studies by other government agencies and the private sector. Finally, the Commission will devote a portion of its own extramural and analytic resources to improving data bases and methods for measuring changes in quality of care and health outcomes. The Commission welcomes information from all sources dealing with the effect of PPS on quality of care.

ENCOURAGING HOSPITAL PRODUCTIVITY AND LONG-TERM COST-EFFECTIVENESS

The Commission's concern for maintaining quality under PPS is accompanied by a parallel concern for promoting productivity and long-term cost-effectiveness of the health care system. Increases in payments for hospital care can be limited while maintaining a high level of quality when productivity is improved. Productivity is improved when fewer or less costly resources are used to yield a product of given quality; the cost of the product is reduced by the cost of the resources no longer used.

PPS uses the DRGs to classify patients and define the hospital product. Hospital care is only one of many "products" which contribute to improvement in the health status of an individual. Self care, ambulatory care, and home health services are examples of other modes of care within the health care system that contribute to improved health. Thus, the Commission will be looking beyond the hospital setting in assessing and measuring productivity in the context of PPS. The policies of other payers, the effect of competing incentives, and the subsequent impact on productivity will also be considered in the Commission's analysis.

The Commission believes that cost-based reimbursement encouraged hospitals to use additional services, sometimes with inadequate consideration about whether the benefits were worth the costs. PPS provides incentives for improving productivity and cost-effectiveness of services. PPS also creates incentives to move services to other settings. If these services can be provided at lower cost and equal quality in other settings, such a move should be encouraged. Adjustments will need to be made in hospital payments to reflect the movement of services to alternative sites, however, to avoid paying for services twice—once in the hospital DRG payment and again in payment for outpatient services.

The Commission is aware that the emphasis on reducing costs may deter the adoption of new services which may initially increase costs, even though in the long-run they may improve patient care, productivity, and cost-effectiveness. The Commission will closely monitor the system and, if necessary, develop recommendations to encourage the adoption of such services.

FACILITATING INNOVATION AND APPROPRIATE TECHNOLOGICAL CHANGE

The Commission believes the Medicare prospective payment system should have an unbiased effect on technological advancement. PPS payment levels should not inhibit the development or diffusion of new technologies and practices, nor should payment levels result in their inappropriate adoption. Instead, technology and practices should be examined in light of both long- and short-term potential effects on quality and productivity.

In reviewing the potential effects of PPS on the adoption of new technologies and practices, the Commission must consider whether payment policies and amounts are sufficient to enable hospitals to adopt such services. Current PPS financial incentives encourage the adoption of cost-saving technologies. Adjustments may be necessary to encourage the adoption of more costly but quality-enhancing new technologies. The Commission also believes that adjustments may be necessary to encourage the adoption of technologies and practices that are more costly when examined in the context of a single hospital admission, but may be cost-effective when considered from a broader health care system perspective over a longer period of time.

The Commission has taken the first steps toward addressing these concerns by examining a series of options for adjustments to PPS that could help foster the appropriate adoption of new technologies. Continued analysis of these options is a high priority for the Commission. One approach is to adjust the current DRG classifications and weights to reflect changes in technology and practice patterns. In addition, the Commission has considered and will continue to explicitly consider scientific and technological advances as part of recommendations related to the update factor.

In addition, the Commission believes that the current capital pass-through may potentially distort PPS incentives by encouraging investment in capital-intensive technologies with inadequate regard to their true cost-effectiveness or alternative approaches for providing needed services. For this reason, the Commission believes that a decision should be made about payment for capital costs as soon as possible.

MAINTAINING STABILITY FOR PROVIDERS, CONSUMERS, AND OTHER PAYERS

The Commission believes that in a rapidly changing health care delivery and financing environment, its recommendations should provide as much predictability and stability as possible. The Commission has identified many problems during its deliberations, and these are described throughout this report. Equitable and workable solutions are much more difficult to identify. Moreover, as this report is submitted, a large proportion of hospitals have been paid under PPS for less than one year. Thus, the Commission is making only those recommendations it considers most important and amenable to well-informed decision-making.

The Commission's philosophy in decision-making has been to act where there is immediate need for change and to allow the new PPS to become fully mature and operational—and stable—before suggesting new approaches or significant alterations. Therefore, if several solutions were suggested for resolving a particular problem, the Commission has often chosen the direction least disruptive to the originally structured PPS—and

to the hospitals, consumers, and other payers affected by it. Similarly, if there is doubt about the need for or impact of a change, the Commission has chosen to leave the subject for future analysis and discussion, when more data, information, and experience will be available.

DECISION-MAKING BASED ON RELIABLE AND TIMELY DATA AND INFORMATION

The Commission believes that its major contribution to the maintenance and evolution of the maturing PPS is the development of recommendations grounded in quantitative data and analytic reasoning. The availability and use of accurate and timely data and information, analyzed and presented without bias as a basis for decision-making, is a critical priority of the Commission and its staff. Analytic information must, of course, be tempered with judgment and experience, but the Commission will continue to strive to fulfill a role in which its approach is always to inform itself with the best and most timely information available before making recommendations.

The Commission has examined the data systems and reviewed the information that formed the basis for development of standardized amounts, DRG weights, and adjustments in PPS. The Commission is aware of a number of deficiencies in this base. Many of these deficiencies are unavoidable during this initial stage of PPS; over time they must be corrected. The Commission will continue to place a high priority on examining existing data and, where appropriate, developing new data. The Commission believes its recommendations, as well as the future work and research agenda described in Chapter 4, clearly reflect an orientation toward decision-making which is based upon an analytic and quantitative approach, using the most timely and appropriate data available.

Chapter 3
Recommendations

The Commission's priorities and concerns described in Chapter 2 were evident throughout its first year and are reflected in the recommendations that follow. The recommendations are in two parts, following the Commission's statutory requirements: First are recommendations concerning the fiscal year 1986 "percentage change" or update factor which determines the overall change in the PPS standardized amounts, exclusive of any other adjustments. Second are recommendations concerning adjustments to the "classifications and weighting factors" which determine relative changes in DRG payments. Discussion of these two types of recommendations is followed by a statement on the context in which these recommendations are made.

The major part of Chapter 3 consists of the Commission's 21 recommendations, each followed by a brief discussion of the rationale underlying the Commission's decisions. Details on background information, statistical analyses, and alternative options are contained in the Technical Appendixes.

The Update Factor

The statute requires the Commission to "...take into account changes in the hospital market basket..., hospital productivity, technological and scientific advances, the quality of care provided in hospitals (including the quality and skill level of professional nursing required to maintain quality care), and long-term cost-effectiveness in the provision of inpatient hospital services," in making its recommendations on the annual update factor. The Commission is required to report its recommendations to the Secretary of Health and Human Services no later than April first of each year, and "...Taking into consideration the recommendations of the Commission, the Secretary shall determine ...the percentage change... which will take into account amounts necessary for the efficient and effective delivery of medically appropriate and necessary care of high quality."

The Commission has considered both aggregate payment amounts and the distributional effects of payment decisions on beneficiaries and hospitals in the belief that these effects are as important to the maintenance of high-quality care and to the achievement of other system goals as the level of the update factor. The Commission is concerned that an update factor which may be adequate on the average may be inadequate for certain types of hospitals and the Medicare beneficiaries who depend on these hospitals. Thus, some of the Commission's recommendations address the distributional consequences of the update factor and others the determination of the level of the update factor.

The first recommendation reflects the Commission's overall judgment of the appropriate level of the update factor for fiscal year 1986. The Commission believes its responsibility under the statute is to be as specific as possible in making its recommendation on this factor. The recommendation would require estimates for the hospital market basket and for "real" case-mix change to be developed by the Secretary. The Commission is recommending a specific amount for the remaining components of the "discretionary adjustment factor" which, in addition to the market basket increase, would comprise the update factor.

The actual percentage change in the average payment per DRG for fiscal year 1986 may differ from the update factor. The update factor is applied to the standardized amounts, but the overall increase would also be affected by across-the-board adjustments to the DRG weights. The Commission proposes adjusting the DRG weights to remove the effects of any reported case-mix change that will have occurred during fiscal year 1985 so that changes in coding occurring this year would not be built into future PPS payments (Recommendation 17).

In Recommendations 2 through 9, the Commission proposes changes in the hospital market basket, the component of the update factor that re-

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flects inflation in the prices that hospitals pay for inputs. Inflation in prices of inputs, the goods and services that hospitals purchase and use in the provision of hospital care, is generally thought to be beyond the control of hospitals and therefore appropriate adjustments should be reflected in hospital payment amounts when such prices are predicted to increase from one year to the next. Detailed information pertaining to the market basket recommendations is in Technical Appendix B.

Recommendations 10 through 12 concern the discretionary adjustment factor, which is the portion of the update factor that reflects considerations other than the market basket of hospital input prices. The Commission decided that the DAF should be set to reflect goals for the attainment of productivity gains and for scientific and technological advancement. The Commission also identified a third consideration for the DAF, an allowance for "real" changes in the mix of Medicare inpatients (contrasted with changes that arise only from altered coding practices). The Commission selected a specific numerical adjustment for productivity and scientific and technological advancement in Recommendation 10 but proposes that the Secretary develop the allowance for real case-mix change in Recommendation 11. Recommendation 12 satisfies the Commission's statutory obligation to recommend an update factor for hospitals and distinct parts of hospitals excluded from PPS.

In concept, the discretionary adjustment to the update might be positive, zero, or negative depending on judgments regarding the relative importance of the components that comprise the DAF. The Commission's recommendations reflect its best collective judgment regarding a discretionary adjustment for fiscal year 1986. It should not be assumed that the Commission's recommendation in subsequent years will be for the same amount. Detailed information on the DAF is in Technical Appendix B.

Recommendations 13 through 15 address the distributional concerns expressed above. The Commission selected the definition of hospital labor market areas and disproportionate share hospitals as two problem areas of PPS deserving immediate attention in the establishment of the fiscal year 1986 payment rates. This does not imply that other problem areas are not also of great importance, but the Commission believes that the distributional consequences of these two problems are sufficiently severe, and the potential for finding workable solutions is sufficiently high, that immediate attention is warranted. Detailed information on these distributional issues is in Technical Appendix B.

Recommendation 16 pertains to the issue of rebasing the standardized amounts. The Commission goes on record in favor of rebasing, but recognizes that doing so for the fiscal year 1986 rates would be inadvisable due to the lack of suitable data. It is expected that rebasing concerns, including the identification of suitable data and methods of calculation, and the development of policy options for establishing new levels of the standardized amounts, will receive considerable attention from the Commission during the coming year.

Classifications and Weighting Factors

The Commission is required to "...consult with and make recommendations to the Secretary with respect to the need for adjustments [in classifications and weighting factors]...based on its evaluation of scientific evidence with respect to new practices, including the use of new technologies and treatment modalities." These adjustments refer to the system for "...classification of inpatient hospital discharges by diagnosis-related groups and a methodology for classifying specific hospital discharges within these groups," and to the assignment of "...an appropriate weighting factor [to each diagnosis-related group] which reflects the relative hospital resources used with respect to discharges classified within that group compared to discharges classified within other groups." The Secretary is required to "...adjust the classifications and weighting factors...for discharges in fiscal year 1986 and at least every four fiscal years thereafter, to reflect changes in treatment patterns, technology, and other factors which may change the relative use of hospital resources." The Congress has directed the Commission to make recommendations regarding the DRGs ". . . for such groups to reflect appropriate differences

in resource consumption in delivering safe, efficacious, and cost-effective care."

Recommendation 17 concerns recalibration of the DRG weights with a data base that is newer, more complete, and more accurate than the 1981 data on which the current DRG weights are based. The Commission's recommendation reflects its belief that, because of potential inaccuracies in the data originally used to establish the DRG weights and changes in hospital practice patterns since 1981, a full recalibration for the 1986 rates is advisable.

Two important features of the Commission's treatment of recalibration are, first, that it includes a recommendation for normalizing DRG weights so that the average weight of all PPS discharges is the same as it was at the beginning of fiscal year 1985 and, second, that it includes a recommendation to adjust DRG weights across the board for any change in reported case mix occurring during fiscal year 1985. The reduction in DRG weights implied by this adjustment would be offset, in part, by the positive allowance for real case-mix change described above as part of the recommended update factor.

This recommendation does not imply, nor should it be inferred, that the Commission will propose a recalibration or normalization next year or any specific subsequent year, nor does it suggest that the Commission will recommend the same type of data or approach for recalibration in the future. Further information on recalibration and related adjustments is in Technical Appendix C.

Recommendations 18 through 20 pertain to specific weighting, classification, and assignment issues concerning three procedures: pacemaker implantation, cataract extraction and intraocular lens implantation, and percutaneous transluminal coronary angioplasty. Two additional procedures, bone marrow transplantation and treatment of infective endocarditis, were determined not to require in-depth analysis at this time, as indicated in Recommendation 21. Detailed information concerning pacemaker implantation (Recommendation 18) is in Technical Appendix D; information pertaining to Recommendations 19 through 21 is in Technical Appendix C.

The Commission may make additional recommendations concerning these issues in the future, if new information becomes available. Furthermore, the majority of DRG weighting, classification, and assignment issues undertaken for review by the Commission in its first year require additional data and analysis. A summary of the issues currently under review is provided in Chapter 4. The Commission will supplement this report with additional recommendations as appropriate.

The Context for These Recommendations

The Commission firmly believes that adoption of these recommendations will result in substantial improvements in PPS and will maintain the essentially positive experience that implementation of PPS has achieved to date. Nevertheless, because these recommendations necessarily are made in a rapidly changing health care environment, both in Federal health policy and in the private health sector, the Commission is concerned that the context in which its decisions were made be recognized. Changes in this context may lead the Commission to reconsider some of its recommendations. Such changes will also influence the Commission's choices of issues to address in future reports.

The Commission's recommendations are made under the assumption that current law and its interpretation will remain in force during fiscal year 1986. The Commission decided early in its deliberations that it would not attempt to predict policy changes arising from actions of the Executive Branch or the Congress. Nevertheless, if important policy changes occur, the Commission may wish to reconsider some of its recommendations.

The Commission also recognizes that its recommendations are made at a time when hospitals are in either the first or second year of experience with PPS and only a fraction of their payments are based on Federal DRG payment rates. During its deliberations, the Commission has learned about several demonstrated and potential problems of PPS which, if not corrected, may result in unwarranted hardships for some hospitals and Medicare beneficiaries. The Commission has made specific recommendations con-

cerning two of these problem areas and has committed its resources to the study of several others.

The Commission believes that, as the transition to a fully implemented prospective payment system proceeds, serious problems must be identified and corrected. The Commission considered the possibility of specifically proposing a delay in the transition to allow additional time for problem solving but did not do so because it did not wish to interfere with the momentum of PPS. Nevertheless, the Commission has asked its staff to continue the analysis of the effects of the transition. If problems exacerbated by the transition are sufficiently severe and not correctable by other policy measures, a recommendation for delay in the transition will be considered. Further information on the transition issue is in Technical Appendix B.

Finally, the Commission does not wish to imply, nor should it be inferred, that issues not addressed in its 21 recomendations are unimportant. The Commission recognizes that there are many other important issues deserving serious attention and has already scheduled several of these issues for analysis in coming months. Chapter 4 presents a summary of these issues.

RECOMMENDATIONS REGARDING THE UPDATE FACTOR

Recommendation 1: Amount of the Update Factor

For fiscal year 1986, the standardized amounts should be updated by the projected increase in the hospital market basket, minus one percentage point, plus an allowance for the estimated increase in real case-mix complexity during fiscal year 1985. The negative one percentage point is a combined adjustment of a positive allowance for scientific and technological advancement and a negative allowance for productivity improvement and hospital product change.

This recommendation reflects the Commission's collective judgment of the appropriate increase in the level of payment per Medicare discharge under PPS, assuming that the Commission's other concerns regarding the market basket component of the update factor, the DRG weighting factors, and the distribution of payments across PPS hospitals are also addressed in the fiscal year 1986 payment rates. Further, this recommendation is based on the premise that no net reductions or increases in average per case payments to hospitals will be effected through measures other than the update factor, such as reducing the indirect teaching adjustment, incorporating capital payment under PPS at a budget-saving level, adjusting for coding changes occurring before fiscal year 1985, or any other change in total payments per discharge under PPS.

The rationale for this recommendation is provided in the discussions accompanying Recommendations 2 through 16. The Secretary should estimate the projected increase in the hospital market basket and the increase in real case-mix complexity using the most current data available at the time the payment rates are determined. These estimates, combined with the one percentage point net reduction for scientific and technological advancement, productivity improvement, and hospital product change, would determine the increase in average payments per discharge under PPS for fiscal year 1986.

The Hospital Market Basket

Recommendation 2: The Number of Market Baskets

For fiscal year 1986, a single market basket should be continued for those hospitals under PPS. The Commission will undertake a study to determine the appropriateness of developing market basket measures that reflect variation in economic factors across hospitals. The use of multiple market baskets by region and classes of hospitals within regions will be examined. If the analysis indicates that multiple market baskets are appropriate, the study will also include an assessment of the data required for implementation.

The effects of inflation on a hospital or group of hospitals can differ from those measured by a single national hospital market basket for a number of reasons. First, increases in the prices of some items—most notably wages—vary across

regions. Second, regional differences in price levels may affect the market basket weights, which represent the share of total hospital expenditures going to a component. Market basket weights may also differ if hospitals purchase different amounts of an input than the average (e.g., hospitals in colder climates may need to purchase more fuel). Finally, a single national market basket may not be an appropriate measure of inflation for hospitals that use a different mix of inputs than the average because they provide different services.

Since past analysis has shown that differences in hospital input price increases across regions and certain hospital types are not statistically significant, the Commission has decided not to recommend that separate market baskets be developed at this time. But because the analysis is limited, further study should be undertaken to evaluate the extent to which prospective payment rates might be affected if variation were allowed in market basket weights, or regional inflation rates. Examination of the possible overlap between the adjustment for area wage differences already included in PPS payments and the development of regional market baskets should be included. Future consideration of multiple market baskets will require a trade-off between the benefits of improvements in equity and the costs of increasing the complexity of the payment system.

Recommendation 3: Market Basket for Psychiatric, Rehabilitation, and Long-Term Care Hospitals

Separate market basket weights should be used for the group of psychiatric, rehabilitation, and long-term care hospitals and related distinct-part units that are exempt from PPS, but subject to the TEFRA rate of increase limitation. Separate market basket weights need not be developed for children's hospitals.

Due to the nature of the services they provide, the labor share of total expenses in psychiatric, rehabilitation, and long-term care hospitals is substantially higher than in other hospitals. To best reflect the effects of inflation, the market basket weights used to set the target rate of increase for these hospitals should take into account this differing use of inputs, and any others that may exist. Although children's hospitals are also exempt from PPS, the current market basket weights are more appropriate for this group, since the labor share of total expenses in these hospitals is very close to the overall average on which the current weights are based.

Recommendation 4: Market Basket Wage Component—Occupational Groups

The wage component of the market basket should be split into three categories, each with separate weights: Managers and Administrators, Professionals and Technicians, and Other Hospital Workers. Changes in wages for these categories should be measured as follows:

- **Managers and Administrators: the Employment Cost Index (ECI) for Managers and Administrators.**
- **Professionals and Technicians: a 50-50 blend of the Average Hourly Earnings (AHE) for the hospital industry and the ECI for Professionals and Technicians.**
- **Other Hospital Workers: a 50-50 blend of the AHE for the hospital industry and the ECI for all private industry.**

(The discussion for all three of the Commission's recommendations regarding the treatment of wages in the hospital market basket follows Recommendation 6.)

Recommendation 5: Employment Cost Index Feasibility Study

For the long run, the Secretary should work with the Bureau of Labor Statistics to study the advantages and feasibility of developing an Employment Cost Index for the hospital industry that includes both public and private hospitals and covers increases in both wages and fringe benefits.

Recommendation 6: Study Effects of Changes in the Minimum Wage Law on Hospital Workers.

The Commission plans to study the extent to which hospital workers would be affected by changes in the Federal minimum wage law. The intent of the study is to detect whether, under PPS, workers who earn more than the minimum wage are differentially affected by statutory increases in the minimum wage compared with

workers in other industries. If a differential effect is found to exist, the Commission will consider requesting the Secretary to take appropriate action.

Wages are the largest single component of the hospital market basket, accounting for nearly 60 percent of hospital expenses. Currently, HCFA measures changes in all hospital wages by the AHE in the hospital industry, a data series collected by the Bureau of Labor Statistics.

Recommendations 4 through 6 address two major problems with the current treatment of wages in the market basket. First, the AHE series does not separate changes in inflation from changes in the skill mix of workers in the hospital industry. As a result, some portion of the growth in the series over time has probably been due to shifts in the type and use of hospital employees (e.g., substitution of RNs for LPNs).

Creating separate wage categories by occupational groups as the Commission recommends would take account of broad changes in skill mix among managers, professionals, and other hospital workers. Weights for the recommended categories could be developed using 1980 Census data. In addition, differences in wage growth among these groups would also be addressed. In particular, a separate measure of wage change would be included for managers and administrators, who are excluded from the AHE series currently used.

The second major problem addressed by the recommendations is that use of a price change measure specific to the hospital industry allows hospital behavior—including the response to PPS incentives—to influence the increase in the market basket. Since the AHE series has risen in the past at a relatively high rate compared with other industries, there has been concern that exclusive use of a hospital industry series would allow hospitals to increase wages faster than other industries even when a differential was not warranted. More recently, however, growth in the AHE hospital series has slowed more rapidly relative to wages in other industries. If hospital wage growth is slowed in response to PPS incentives for cost containment, the market basket forecasts will reflect this, and hospital workers could be limited to wage increases lower than that of other workers.

Blending the AHE with the ECI, which includes workers outside the hospital industry, would mitigate these effects, yet still partially reflect any unique circumstances in the labor markets for hospital employees. To the extent that the hospital labor market is unique, exclusive use of the ECI or other broader industry measures might fail to adequately portray the economic forces beyond the control of hospitals.

For the long run, an ECI should be developed for the hospital industry. Although it would not be used to replace the ECI measures recommended above, a hospital industry ECI might be preferred to the AHE series since the ECI measures skill-mix differences and hourly wages directly. If developed, this series could be used to measure changes in hospital industry wages and may or may not be used in the market basket.

Recommendation 7: Correction of Market Basket Forecast Errors

The update factor should include a correction for substantial errors made in the previous year's forecast of changes in the external price measures used in the hospital market basket. In the judgment of the Commission, substantial errors are those that equal or exceed 0.25 percentage points (or, when rounded in the published forecasts, 0.3 percentage points). The Commission will undertake a study to determine the extent to which differences between forecasted and actual increases in the internal price change measures are due to factors beyond the hospitals' control. Substantial errors determined after study to be due to factors beyond the hospitals' control should be corrected in the update factor.

(The discussion for both the Commission's recommendations regarding correction of market basket forecast errors follows Recommendation 8.)

Recommendation 8: Statutory Change for Forecast Error Correction

The Secretary has determined that she does not have the statutory authority to correct for market basket forecast errors. Therefore, the Secretary should seek statutory change to provide explicitly that the update factor include a correction for errors in forecasting the market basket beginning in fiscal year 1986.

Regardless of the method of forecasting inflation in the hospital market basket, errors are bound to occur that might have substantial financial consequences for hospitals or the Federal government. A correction need not be made, however, when the forecast error is small, since both the Federal government and hospitals should be able to manage within a margin of error. The prospective nature of payment rates is not compromised when the correction is made by adjusting the increase in the following year's rates.

The recommendation, however, distinguishes between internal and external price change measures (or price proxies). External proxies are those that measure price changes that extend beyond the hospital industry. For example, inflation in food prices is measured in the hospital market basket by a combination of food components of the Consumer Price Index and the Producer Price Index. Changes in these measures are beyond the control of the hospital industry, and therefore differences between actual and forecasted changes in the price proxy can be attributed to forecast error alone. Alternatively, internal proxies are those that apply solely to the hospital industry (e.g., wages as measured by the AHE series for the hospital industry). In this case, behavior of the hospital industry affects the actual increase in the price proxy. If the difference between forecasted and actual increases in internal proxies were automatically adjusted, hospital incentives to limit price increases in those categories would be reduced. Until further study can distinguish between the effects of forecast error and hospital behavior, no correction should be made for the differences between forecasted and actual changes in internal price proxies.

The Secretary has interpreted the statute to prohibit an adjustment for correcting market basket forecast errors. Because of this, the statute should be clarified by the Congress to explicitly require correction of forecast errors in the update factor.

Recommendation 9: Rebasing of Market Basket Weights

Market basket weights should be rebased at least every five years. Rebasing should be performed more frequently if significant changes in the weights occur. In addition, the market basket weights will need to be rebased if payment for capital or direct medical education is included in the PPS rates.

The current HCFA staff plan to update market basket weights every five years seems reasonable, but more frequent rebasing might be necessary if hospitals change—perhaps in response to the PPS—the mix of inputs they use to provide services. In addition, if policy changes are made to include capital or direct medical education costs in the overall PPS rates, the market basket weights will need to be recalculated.

Discretionary Adjustment Factor

Recommendation 10: Allowance for Productivity and Scientific and Technological Advancement Goals

For the fiscal year 1986 payment rates, the allowance in the discretionary adjustment factor for scientific and technological advancement, productivity improvement, and hospital product change should be set at minus one percentage point.

The discretionary adjustment factor (DAF) is based on a policy decision regarding the rate at which the Medicare standardized amount should change beyond increases in the hospital market basket. For the fiscal year 1986, the Commission has included in the DAF three broad allowances: one for technological and scientific advances; one for productivity; and one for changes in the hospital product. An additional allowance for real case-mix change should also be added by the Secretary. In future years, the Commission may choose to expand the elements in the DAF to reflect other factors.

This recommendation addresses the quantitative allowance for productivity, product change, and technological and scientific advances. The fiscal year 1986 adjustment for real case-mix change is addressed in Recommendation 11 and its accompanying discussion.

The update factor should encourage hospitals to seek productivity gains while, at the same time, ensure that sufficient funds are available to finance the adoption of quality-enhancing technologies after balancing the medical benefits against the

costs of such technologies. Together, these allowances in the DAF constitute a judgment about how much of the desired growth in technology can be funded out of productivity gains or other resources already in the payment system.

In developing quantitative allowances for this portion of the DAF, the Commission was required to make implicit judgments for which there is little precedence. Moreover, the technical methods and data available upon which to base these judgments yield imprecise estimates.

The Commission's recommendation for the DAF reflects the following broad guidelines:

Adjustments	*Percentage Allowance*
Scientific And Technological Advances	+1.5 to +2.0
Hospital Productivity	−1.5 to −2.0
Changes In The Hospital Product	−1.0
Net Adjustment (Before Inclusion Of The Allowance For Real Case-Mix Change)	−1.0

By recommending a small negative aggregate allowance for these elements of the DAF in fiscal year 1986, the Commission does not imply that there should be no allowance for technological growth. Rather, it is reasonable to expect that, at least for one year, any requirements for new technology can be funded from potential gains in productivity and changes in the types of services produced in an inpatient setting. Moreover, the DAF allowance is not the only method to finance technology adoption. In particular, the capital costs associated with new technologies are currently reimbursed on a retrospective cost basis under PPS.

The adjustment for technology reflects the Commission's view that the hospital industry will not continue to experience the same rate of growth as in the past decade. Future expenditures should reflect a balance between long-term growth in the hospital industry and growth in the remainder of the economy.

In the hospital industry, productivity is difficult to measure due to problems in defining an appropriate output or product. In the simplest terms, the hospital product under PPS is a discharge, as classified and labeled by the DRG system. The Medicare PPS provides significant incentives to change the nature of this product, including incentives to shift services from an inpatient to an outpatient setting or to move patients out of the hospital more quickly. As a result, the output previously produced during an inpatient stay can be produced by using a mix of inpatient and outpatient services.

It is difficult to separate changes in the hospital product from changes in productivity. The potential for productivity gains was examined from a variety of perspectives. These included analyses of staffing patterns and changes in average length of stay as well as the development of a specific productivity target for the industry. Based on these analyses, the Commission adopted an overall productivity guideline between minus 1.5 and minus 2.0 percent.

Changes in the hospital product can result from a shift of services from inpatient to other care settings. This shift would reduce the cost to the hospital of DRG production without necessarily achieving any reduction in total costs. Under these circumstances, the Medicare program could be overpaying for services since the cost base for the DRG rates includes the costs of services that have subsequently been removed from the inpatient setting.

Quantitative evidence regarding changes in the hospital product is limited to changes in average length of stay. Changes in length of stay, however, reflect both changes in productivity and changes in the hospital product. The most recent data available from the American Hospital Association's Panel Survey indicate a 7.8 percent decline in length of stay for patients 65 years of age and older in the first nine months of 1984 compared with the same period in 1983. Although it cannot be assumed that all of this change is related to PPS, the declines in length of stay are consistent with the incentives established by the Federal cost containment initiatives under TEFRA and PPS.

While the shorter lengths of stay cannot be directly or immediately translated into a 7.8 percent reduction in costs, the Commission believes that for fiscal year 1986 such a decline would result in at least a 3.7 percent reduction in costs due to productivity gains and a 1 percent reduction due to changes in the hospital product. In order

to continue sharing gains from improved efficiency, approximately half of the productivity cost savings should be retained by the hospital industry. In addition to providing support for investment in new technology and services, these funds would be available to develop hospital programs to assist patients who may have difficulty gaining access to care, and to help displaced hospital employees locate other employment or vocational retraining.

The recommendation for the DAF is based on the assumption that the Commission's other recommendations in this report are implemented. Taken together, these recommendations are intended to ensure that the Medicare program continues to pay a reasonable price for inpatient hospital services. The Commission is concerned that, while an update factor significantly less than the historical amounts is adequate on the average, it may be inadequate for certain types of hospitals and the Medicare beneficiaries they serve. This concern is evidenced in the Commission's recommendations regarding disproportionate share hospitals and hospital labor market areas (Recommendations 13 through 15). Implementation of these recommendations will materially affect the maintenance of equity under increasingly constrained PPS expenditures.

Further, the Commission made this recommendation under the explicit assumption that no adjustments affecting the level of average PPS payments per case would be made other than those it recommended.

The Commission believes the recommended level of the DAF adequately meets the costs of treating Medicare patients. It is not appropriate or expected that hospitals use other sources of revenue to absorb the costs of treating Medicare patients (e.g., raising charges to other payers or using reserve funds). To expect other sources to fund Medicare patients is an inappropriate policy that eventually would compromise the access of Medicare beneficiaries to quality care.

Recommendation 11:
Adjustment for Case-Mix Change

Prospective payments to individual hospitals and in the aggregate should reflect real changes in case mix. Changes in reported case mix that are unrelated to actual differences in the types of patients treated should not be built into future PPS payments.

Over time, changes in the distribution of patients across DRGs would be expected to increase the average PPS discharge weight for two reasons. First, real changes in the types of Medicare admissions may occur due to shifts in patterns of service delivery, the aging of the population, or other factors. In particular, the mix of hospital inpatients across DRGs may become more complex as patients with less complicated diagnoses are more often treated on an ambulatory basis. For the same reason, the mix of patients within DRGs might also become more complex, although this would not be reflected in the average payment per discharge. Prospective payment should include compensation for these types of case-mix change, which are due to changes in patient characteristics.

Second, the average PPS discharge weight might increase as hospitals code a higher proportion of patients into more complex DRGs. This would be expected particularly in the initial years of PPS, since hospitals now have incentive to improve the completeness and accuracy of the diagnostic information reported on Medicare bills. This type of case-mix change should not be built into PPS payment amounts, because changes in coding practices do not reflect an increase in the resources required to treat patients.

Since PPS payments automatically reflect all changes in reported case mix as they occur, an adjustment is necessary periodically to pay only for real case-mix change. The adjustment should also include an allowance for the overall increasing complexity in the mix of patients within DRGs.

For fiscal year 1986, the Commission recommends that, through recalibration, normalization, and adjustment of the DRG weights as described in Recommendation 17, the effects of case-mix change occurring in fiscal year 1985 should be removed from the DRG weights so that changes in coding would not be built into future PPS payments. Along with this, an adjustment for case-mix change occurring during fiscal year 1985 estimated to be caused by real shifts in the mix of patients should be included in the update factor. If adopted, the combined effect of these recommendations would be to allow PPS per-discharge payments to rise as a result of increasing complexity in the Medicare cases hospitals treat, if such increases occur, but not as a result of past changes in coding.

In determining the adjustment for real case-mix change, the Secretary should analyze the most recent data available when the fiscal year 1986 payment rates are set. The Commission will review the findings of this analysis when they are available, and may recommend a specific adjustment at that time.

Recommendation 12:
Update Factor for Exempt Hospitals

In addition to the projected increase in the market basket, hospitals and hospital distinct-part units exempt from PPS should receive a minus one percentage point adjustment in their fiscal year 1986 update factor for productivity improvement and scientific and technological advancement.

In addition to a full allowance for inflation, the Commission has emphasized that the update factor should incorporate policy goals for productivity and scientific and technological advancement. These concepts are as difficult to quantify with precision for exempt hospitals and distinct part units as they are for hospitals included in PPS. Nevertheless, the Commission believes that the update factor for both sets of hospitals should include an adjustment for these elements.

The Commission recognizes that differences exist between PPS hospitals and exempt hospitals and units, as illustrated in the recommendation for different market basket weights related to different mixes of inputs. It is possible that these hospitals differ from PPS hospitals in other ways that would suggest differing allowances for productivity and scientific and technological advancement. Data are not currently available, however, to substantiate such differences.

Moreover, unlike PPS hospitals, exempt hospitals currently are not paid on a case-mix adjusted basis, and would not be subject to an adjustment for observed coding change in the recalibration process. Therefore, the Commission recommends that a minus one percentage point adjustment be adopted for exempt hospitals, with no additional adjustments for case-mix change. A separate update factor for exempt hospitals and units may be considered in the future.

Studies are being considered or conducted to gather and evaluate data specific to exempt hospitals to determine whether they can be phased into PPS, or if their specific products and processes cannot be fairly dealt with under PPS. Information from these studies will provide guidance upon which to base recommendations in future years regarding the appropriateness of a separate adjustment for different kinds of hospitals.

Hospital Labor Market Areas—Area Wage Index

Recommendation 13:
Improvement of Labor Market Area Definitions

In order to better reflect hospital labor markets, the Secretary should improve, as soon as possible, the current definition of a hospital labor market area used to adjust PPS rates for area wage differences, taking into account variations in wages paid in the inner city compared with suburban areas within a metropolitan area, and variations paid in different rural locations within a state. Implementation of this recommendation should not result in any change in aggregate payments.

The current wage index used to adjust payments for inter-area wage differences does not distinguish separate labor markets within Metropolitan Statistical Areas (MSAs). This inadequacy

raises serious equity concerns. Several studies have shown that there is substantial variation in the wages paid in inner city as compared with suburban areas within the same MSA. Similar concern has been expressed regarding rural areas within a state. If PPS payments are to adjust for actual variations in area wage levels, the differences in hospital labor markets need to be reflected in the application of the area wage index.

The greatest difficulty faced in implementing the Commission's recommendation will be drawing the boundaries delineating hospital labor market areas. This is in part a problem generic to defining any labor market. The appropriate boundary definition is highly dependent on how the wage index is to be used. For the purposes of PPS, the boundaries for a hospital labor market area should be drawn so that the impact of the behavior of any single hospital on the wage index used to adjust that hospital's payment would be negligible. In small MSAs, there may be too few hospitals to designate more refined market areas. Thus, while it might be desirable to develop separate core and ring designations for each MSA and more refined designations for rural areas within states, it may not be possible to do so in every area.

The Commission clearly recognizes that there are substantial difficulties in developing new area wage indexes based on revised market areas. Nevertheless, the Commission believes the payment inequities engendered by the current system are sufficiently severe to warrant immediate correction. HCFA has better data on hospital labor markets than ever before, and the Secretary plans to revise the index for fiscal year 1986. To ensure the stability and predictability of PPS rates for hospitals in the future, it would be highly desirable to revise the wage index only once during this period. Thus, the Commission urges the Secretary to implement this recommendation in conjunction with any other revisions planned for the area wage index.

Disproportionate Share Hospitals

Recommendation 14: Disproportionate Share Adjustment for Fiscal Year 1986

The Secretary should develop a methodology for adjusting PPS rates for disproportionate share hospitals and implement the adjustment in fiscal year 1986. The adjustment should be implemented so that it does not change aggregate payments.

The Congress has clearly stated its concern that specific adjustments should be made for hospitals incurring higher Medicare costs per case associated with treating a high proportion of low income or Medicare Part A patients if such costs are not already accounted for in the PPS methodology.

According to both the House Ways and Means Committee and the Senate Finance Committee Reports that accompanied the Social Security Amendments, the disproportionate share provision reflected congressional concern that "public and other hospitals that serve a large number of low income and Part A Medicare beneficiaries" may serve patients "more severely ill than average and that the DRG payment system may not adequately take into account such factors."

The Commission, having reviewed a number of studies, is convinced that hospitals serving a high volume of low income patients (as measured by a variety of definitions) do incur higher Medicare costs per case. For example, these studies (including those conducted by HCFA) indicate that there is a consistent and significant positive relationship between Medicaid volume and Medicare costs per case.

The precise reasons for these higher costs are unknown. Based on its studies, however, the Commission is also convinced that these higher costs per case are substantially due to factors beyond the control of these hospitals. Therefore,

the Commission believes that a specific adjustment for these hospitals should be made in the fiscal year 1986 payment rates.

Development of a specific adjustment will require a reasonable definition of "disproportionate share." (Definitional problems are discussed under Recommendation 15.)

To develop an appropriate adjustment, it will be necessary to separate the effects of serving a low income population from other factors already reflected in the current PPS rates. The indirect teaching adjustment, for example, may adequately compensate some hospitals for the additional costs of serving a disproportionate share of low income patients over and above the indirect costs of having interns and residents on the premises. If the indirect teaching adjustment were reduced on the grounds that the indirect costs of teaching are actually lower than the adjustment provides for, this would have the effect of undercompensating some teaching hospitals which serve a disproportionate share of low income patients.

Similarly, part—but not all—of the undercompensation of some disproportionate share hospitals is attributable to the current methodology used to define labor market areas. If this problem were ameliorated, as the Commission recommends in Recommendation 13, it would reduce but not eliminate the extent of this undercompensation. In addition, to the extent that disproportionate share hospitals incur higher costs related to a mix of patients more severely ill than average, improvements in case mix measurement may subsequently alter the disproportionate share adjustment necessary for these hospitals.

Because of these interactions, calculation of the disproportionate share adjustment should take into account the calculation of other adjustments in order to achieve the appropriate levels and distributions of payments to all hospitals.

The Commission recognizes that determining the magnitude of a disproportionate share adjustment will not be a simple task. It will require careful analysis of the interactions among hospital characteristics to ensure that hospitals are not over- or undercompensated by the mix of adjustments chosen. Given the work already conducted by HCFA on this issue, the Commission believes that a reasonable adjustment is feasible for incorporation in the fiscal year 1986 rates.

In the development of a disproportionate share adjustment, the Secretary should explore the feasibility of a graduated schedule of adjustments (with perhaps a minimum threshold, below which no adjustment would be made), rather than a single adjustment for hospitals that are above a single cutoff point. Such a schedule is likely to be far more equitable than a single adjustment which may provide windfall gains for those just above the cutoff point and unfair losses to those just below that point. California, for example, uses a graduated schedule as a part of its implementation of the Medicaid disproportionate share provision for its noncontracting hospitals.

Recommendation 15:
Definition of Disproportionate Share Hospitals

The Secretary should complete the development of a definition of disproportionate share hospitals in ample time to include adjustments for these hospitals in the fiscal year 1986 PPS payment rates. The Secretary should consider broader definitions of low income than simply the percentage of patients who are Medicaid recipients and should determine whether the share of Medicare Part A patients should be excluded from the definition.

No adjustment to PPS rates for disproportionate share hospitals can be specified and implemented until a reasonable definition of disproportionate share is developed. The Deficit Reduction Act of 1984 requires the Secretary to develop and publish a definition of a disproportionate share hospital and to provide Congress with a list of hospitals which meet this definition. As of late March 1985, the results of the Secretary's study had not been made public.

The Commission clearly recognizes the difficulty in defining disproportionate share hospitals. Problems arise in both the identification of a proxy measure for low income patients and in the relevance of including Medicare Part A patients in that definition.

The majority of studies to date indicate that the volume of Medicaid patients is positively associated with Medicare costs per case. Thus, Medicaid volume has been suggested as a reasonable proxy for low income. Medicaid eligibility criteria, however, vary considerably among the states and regions of the country. Consequently, the proportion of Medicaid patients may not be a consistent measure of low income patients. If the percent of Medicaid patients were used as a proxy measure of low income, then the Commission would urge that this measure be adjusted to reflect variations in state Medicaid eligibility requirements and variations in income levels across states.

The relevance of including Medicare patients in the definition of disproportionate share is questionable if the disproportionate share adjustment is to reflect higher Medicare costs per case associated with serving a given population. First, Medicare patients tend to be evenly distributed among types of hospitals. Second, almost all the studies to date have found no evidence that a higher proportion of Medicare patients contributes to higher costs per case when PPS variables are controlled. A recent American Hospital Association study, however, brings this conclusion into question.

According to this study, higher Medicare costs per case are associated with hospitals having a higher precentage of Medicare revenues or patient days. The findings for Medicare admissions, however, were inconsistent for the two years studied (1980 and 1981). In 1980, the study found that the greater the proportion of a hospital's admissions which were Medicare, the higher the Medicare costs per case. In 1981, a higher proportion of Medicare admissions was not found to be significantly associated with higher Medicare costs per case.

The Commission concludes that a number of key issues concerning the definition of disproportionate share hospital have not been settled. Therefore, the Commission urges the Secretary to perform the necessary analyses to resolve these issues as expeditiously as possible so that an equitable adjustment for disproportionate share hospitals can be developed.

Rebasing the Standardized Amounts

Recommendation 16:
Rebasing the Standardized Amounts

The standardized amounts used to determine hospital payments under PPS should be recalculated using cost data that reflect hospital behavior under PPS. The results of such a recalculation, with appropriate modifications, could be used to rebase the standardized amounts. Although recent cost data are not available to recalculate the standardized amounts for the fiscal year 1986 payment rates, the Secretary should implement a process for timely collection of the cost data necessary for future recalculation. The Commission will later consider more specific recommendations regarding the timing, data sources, and process for rebasing the standardized amounts.

Periodic rebasing of the PPS standardized amounts—that is, use of more recent data to recalculate the average cost per case that, after adjustment and updating, is multiplied by the DRG weight to determine payment for a Medicare discharge—would maintain a relationship between hospital costs and PPS payments that might be eroded by indefinite use of an update factor alone. Under rebasing, payment rates would automatically reflect changes in length of stay, shifts to outpatient services, and the number and types of ancillary services and technologies used to treat hospital inpatients. Taking these changes into account using an update factor alone would require estimating their effects with very limited information.

Rebasing the fiscal year 1986 standardized amounts is not recommended since the most recent cost data available (from fiscal year 1982) are only one year more recent than the data used to set the current rates. Therefore, these data would not yet reflect hospital response to the cost-reducing incentives present under PPS or even under the TEFRA reimbursement limits.

Rebasing requires making specific decisions regarding the data sources used, possible adjustments—including sharing of savings between pro-

viders and the program—and the frequency and timing of rebasing. The Commission will consider these issues in the future.

Data Used to Rebase the Standardized Amounts. Timing of at least the first rebasing of the standardized amounts would be affected by the availability of data. Currently, the standardized amounts are calculated based on data included in the 1981 Medicare cost reports. Because of the lag in submitting and reviewing the cost reports, data from settled cost reports from the first year of PPS will probably not be available until 1987. Rebasing might be possible before then (perhaps for the fiscal year 1987 payment rates) by using cost reports as submitted or final reports from a sample of hospitals. The extent to which using data from a representative sample of hospitals might be a long-run way to implement periodic rebasing, yet still reduce the burden of cost reporting on the hospital industry, should also be considered.

Possible Adjustment to the Rebasing Calculation. Rather than simply using the outcome of a recalculation of the standardized amounts, rebasing could involve recalculating the standardized amounts, and then applying an adjustment. In this way, the effects of rebasing on the payment rates—and ultimately on hospital revenue—could be limited and made more predictable. For example, the change in the standardized amounts resulting from rebasing could be limited to no more than 10 percent of the previous amount. The recalculated standardized amounts might be lower, reflecting hospital response to the cost-reducing incentives of PPS. On the other hand, the recalculated amounts might be higher, due to the restrictions of the budget neutrality provision in effect for the first two years of PPS or to stringent update factors after that.

Frequency and Timing of Rebasing. Rebasing could be done annually, on a predetermined multiyear cycle (such as every four years) or on an ad-hoc basis. Annual rebasing would keep the relationship between payment rates and hospital costs as current as possible. It might be, however, that system changes would not occur rapidly enough to require annual repetition of the rebasing process. A carefully developed update factor might successfully predict trends in the hospital product and productivity, with rebasing necessary only over a longer period or when more dramatic changes occur. In addition, an argument often made against annual rebasing is that hospitals should share in productivity gains for some period before the gains are reduced by lower prices. Economic theory predicts that, even in a competitive market, there is lag time between the achievement of productivity gains and the market's automatic downward adjustment in prices. On the other hand, if costs were rising faster than payment amounts, more frequent rebasing would finance the increases with a short lag.

Short-run decisions about the frequency of rebasing could be made differently than long-run decisions. It may be reasonable to assume, for example, that the greatest changes in hospital behavior will occur in the initial years of PPS and that rebasing should be done more frequently in the early years than over the longer run.

Along with frequency, the timing of rebasing is also an issue to be considered. One choice would be to rebase the standardized amounts whenever the DRG weights are recalculated. In this way, the whole system would be adjusted at once. Alternatively, rebasing might be done on a different schedule than recalibration so that system changes occur more gradually. In addition, rebasing would be appropriate when other changes, such as the addition of capital to the PPS rates, are made in the system.

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RECOMMENDATIONS REGARDING DRG CLASSIFICATIONS AND RELATIVE WEIGHTING FACTORS

Recommendation 17:
Recalibrating the DRG Weights

For fiscal year 1986, all DRG weights should be recalibrated using the 1984 PATBILL data set. The newly recalibrated weights should be:

(1) Normalized so that the average case weight is the same as it was at the beginning of fiscal year 1985, thereby incorporating DRG weight adjustments made before the start of fiscal year 1985

(2) Adjusted for any demonstrable changes in reported case mix occurring during fiscal year 1985

Recalibration of the DRG weights is one way to adjust PPS payments periodically to reflect changes in hospital technologies and practice patterns that alter the relative resources used across DRGs to treat Medicare patients. Recalibration, which adjusts *all* DRG weights, should be contrasted with reweighting, which adjusts only certain DRG weights.

The original approach used to create the DRG weights (i.e., combining charge data from Medicare patient bills with cost information from the hospital's Medicare Cost Report) would probably be preferred for recalibration this year as well, were it not for data lags. The most recent complete data base available for a 1986 recalibration using this methodology is the 1982 MEDPAR file of patient bill records and cost report data for the 1982 hospital accounting year—the year before TEFRA was implemented. These data are only one year more recent than the 1981 data used to establish the current weights, and would not reflect hospital response to cost-control incentives under PPS or even under TEFRA.

Rather than continuing to use older cost data or delaying recalibration until more recent cost data are available, the Commission recommends that recalibration be carried out for fiscal year 1986 using charge data from the Medicare PATBILL file for fiscal year 1984. This recommendation does not imply, nor should it be inferred, that the Commission will continue to recommend recalibration with charge data alone in the future.

DRG weights based on PATBILL data would offer two important advantages over the current DRG weights. First, the PATBILL file contains the most recent data available, including discharges for the first year of PPS. Second, the PATBILL file includes much more detailed diagnostic information than the 1981 MEDPAR file.

A possible disadvantage of using the PATBILL file alone is that it contains data on hospital charges, but not costs. Costs are generally thought to be more reflective of real resource use than charges, since charges can be distorted by hospitals' patterns of subsidization and revenue generation.

The Commission's analysis of the 1981 MEDPAR and Medicare Cost Report data indicates, however, that there is very little difference between weights constructed using the original methodology and weights constructed using charge data alone. Of the 358 DRGs for which weights can be constructed using Medicare data alone, 327 DRGs (representing about 96 percent of discharges) have a weight difference of only between zero and 5 percent.

The Commission also recommends that, after the DRG weights are recalibrated, the new weights should be normalized so that the average weight of all PPS discharges is the same as it was at the be-

ginning of fiscal year 1985. By normalizing in this way, the recalibration would affect only the distribution of payments across DRGs. It would not affect the overall average payment per discharge. A further adjustment to the weights should also be made for any demonstrable change in the average weight of a PPS discharge during fiscal year 1985. Such changes in reported case-mix could be estimated using the most recent fiscal year 1985 patient billing data available when the payment rates are set. If these steps are not taken, the average discharge weight—and therefore the average PPS payment—would change, in part due to shifts in the types of patients treated, and in part due to improvements in hospitals' diagnostic coding.

Adjusting to remove the effects of coding change during fiscal year 1985 from the DRG weights would not take away additional payments already received by hospitals, but it would prevent these coding changes from being built into future PPS payments.

Along with normalizing and adjusting the DRG weights, the Commission recommends that an adjustment reflecting shifts in the types of patients treated be included as part of the update factor for fiscal year 1986 (Recommendations 1 and 11). If these recommendations were adopted, payments would be allowed to rise as a result of increasing complexity in the Medicare cases hospitals treat, if such increases occur, but not as a result of past changes in coding.

The recommendation to recalibrate using charge data alone and to normalize and adjust the DRG weights is made specifically for fiscal year 1986. Concern has been raised that since hospitals have complete control over charges, they may be able to manipulate future charge-based recalibrations. Control of the DRG weights through charge-setting practices would be particularly possible for those DRGs common to only a few hospitals. This issue is not a concern for fiscal year 1986, since the 1984 charge data are already collected, but will be considered by the Commission in future recalibration decisions.

In upcoming reports, the Commission will address the frequency and timing of future recalibrations. This will be done as part of an analysis of long-run options for the development of a PPS data base and the timing of a number of system changes, including rebasing of the standardized amounts, overall reconstruction of the DRGs, and reweighting of individual DRGs as well as recalibration.

Recommendation 18:
Cardiac Pacemaker Implantation

The DRGs involving cardiac pacemakers, DRGs 115, 116, 117, and 118, should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981. The Commission will continue to analyze diagnosis and procedure coding and DRG classification related to pacemaker implantation and replacement; the distribution of costs and payments across discharges, hospitals, and DRGs; and the impact of PPS on the quality of patient care.

The Commission reviewed the appropriateness of Medicare hospital payments for pacemaker implantation. Problems in the 1981 MEDPAR and Cost Report files were identified that could have affected the weights for the pacemaker DRGs. With currently available data, however, it was impossible to estimate the magnitude and direction of these errors. Furthermore, many of the problems identified are not unique to pacemaker implantation and are likely to be corrected with changing hospital incentives under prospective payment.

Several methodologies were used to compare costs in the pacemaker DRGs with payments under PPS. On average, current payments appear to be as appropriate as for other DRGs. Recalibration of all the DRGs will adjust the pacemaker DRGs to reflect changing patterns of resource use related to advances in pacemaker technology (see Recommendation 17).

Several other issues concerning Medicare payments for pacemaker implantation require further evaluation in the future. There is a lack of specificity in the diagnosis and procedure coding for pacemaker recipients and in the grouping of the discharges into DRGs. The pacemaker DRGs have very high medical supply costs, which appear to be similar across all hospitals. However, since PPS adjusts payments to reflect average cost differences among hospitals related to differences in

location, area wage levels, and medical education, payment differences across institutions in the pacemaker DRGs may not correspond closely to cost differences. In addition, the financial incentives of PPS may lead some institutions to limit certain pacemaker-related services. If this occurs, quality of patient care could be adversely affected. Furthermore, hospitals may make decisions that lower the cost of care at the time of implantation but result in higher net costs for Medicare in the long-term care of the patient. The Commission plans to continue its analyses of these issues in the future.

Recommendation 19: Cataract Extraction and Intraocular Lens Implantation

DRG 39, Lens Procedures, should be recalibrated in the same manner as other DRGs to reflect changes in practice since 1981, including the more frequent implantation of an intraocular lens following cataract removal. The Commission will continue to monitor resource use in this DRG to determine whether the types of patients treated as hospital inpatients change with increased outpatient surgery for cataract removal.

Changes in practice patterns since 1981 were examined in cases assigned to DRG 39 because of the significant increase in the implantation of an intraocular lens (IOLs) following the removal of a cataract. Cataract extraction and/or IOL implantation represented 98 percent of the DRG 39 cases in the 1981 data used to construct DRG weights, but the data are insufficient to determine the percentage of these cases receiving intraocular lenses after removal of cataracts.

Other data indicate that the frequency of IOL implantation following cataract extraction has increased substantially. A national sample of hospital discharges indicated 58 percent of cataract extractions in patients 65 and over were accompanied by implantation of an IOL in 1981. This frequency increased to 85 percent in 1983.

Other changes in practice since 1981 that may have affected resource use for patients in DRG 39 are the increased use of posterior chamber lenses, sodium hyaluronate (Healon, a product used during surgery), and extracapsular rather than intracapsular surgery. Also, the length of hospital stays in DRG 39 decreased.

Since all of these practice changes are likely to be reflected in the hospital charges, the Commission recommends that the adjustments to the weight of DRG 39 be made in the process of overall recalibration (see Recommendation 17).

The Commission notes that future changes in practice resulting from the shift in cataract cases to outpatient settings may affect the type of patients treated as hospital inpatients. The Commission will monitor for evidence of this potential change.

Recommendation 20: Percutaneous Transluminal Coronary Angioplasty

Cases in which Percutaneous Transluminal Coronary Angioplasty (PTCA) is the principal procedure should be removed from DRG 108 and temporarily assigned to DRG 112 before recalibration. The Secretary should immediately implement a mechanism to identify bills for cases in which PTCA is performed in order to provide data for analysis and additional adjustments as appropriate.

PTCA is a new procedure that was not covered for Medicare beneficiaries when DRGs were created or when DRG weights were calculated. PTCA does not have a unique ICD-9-CM procedure code, so that cases in which PTCA was performed cannot be separated from cases involving other procedures given the same code. The procedure code used for PTCA is also used for removal of coronary artery obstruction by thoracotomy. As a result of this deficiency in procedure coding, cases in which PTCA is the principal procedure are assigned to DRG 108. This DRG, created for major surgical procedures that usually require significantly greater resources than PTCA, has a weight of 4.3756. Bills for inpatient hospital discharges during fiscal year 1984 show that PPS payments (excluding cost pass-throughs and indirect medical education payments) for DRG 108 were 155.5 percent of total charges for the services even though comparable PPS pay-

ments for all DRGs averaged 71.4 percent of total charges.

Reassignment of cases to alternative DRGs in the absence of complete information should be done only when available evidence indicates good cause for such action. The Commission considered leaving PTCA in DRG 108 until coding deficiencies could be corrected and cases could be identified for analysis of the resources consumed or moving it temporarily to a DRG that is more appropriate but reasonably clinically meaningful. DRG 112, Vascular Procedures except Major Reconstruction, with a weight of 2.3500 was selected based on the limited indirect evidence available concerning the costs of PTCA. This shift in the DRG assignment should be done before the recalibration for the fiscal year 1986 payments, so that the new weights for DRG 108 and DRG 112 will reflect the revised assignment.

The Commission is aware that PTCA is an alternative to coronary artery bypass graft surgery and that, in certain cases, PTCA is a cost-effective and preferred method of treatment. The recommendation to reassign PTCA from DRG 108 to DRG 112 is based on the Commission's analysis indicating that the original assignment was erroneous due to the deficiencies in procedure coding noted above. The temporary assignment of PTCA cases to DRG 112 results in more appropriate payment for the service, while maintaining the incentive to use this procedure when it is indicated for an individual patient. Further, reassigning PTCA will remove financial incentives that may have existed to perform PTCA when an alternative therapy, either medical or surgical, was preferable.

The Commission chose to recommend reassigning PTCA to a lower-weighted DRG because the original assignment was clearly erroneous. The Commission believes it is inappropriate to allow incorrectly categorized technologies to subsidize other types of cases or to allow other cases to subsidize incorrectly categorized technologies. The Commission also will not hesitate to recommend changes that increase payment for an incorrectly categorized technologies when they are identified.

The Secretary should immediately implement a mechanism to identify PTCA, such as manual review of cases in which procedure code 36.0 is used. Once a sufficient number of PTCA cases have been identified, these data can be used to evaluate the resources consumed and to make additional adjustments as indicated.

Recommendation 21: No Change Recommended for Bone Marrow Transplantation and Infective Endocarditis

The Commission has examined Bone Marrow Transplantation and Treatment for Infective Endocarditis and is recommending no changes in DRG classification or weights at this time, other than those that would occur with recalibration. Information will continue to be gathered and the subjects reconsidered at an appropriate time.

Bone Marrow Transplantation is an established treatment for certain conditions. Experience with this technology is limited and it is currently available in only a few centers in the U.S. Although patients over 65 years of age are not considered candidates for this procedure, Medicare patients eligible due to disability may be potential recipients. No specific procedure code exists for bone marrow transplantation. The procedure would currently be classified on the basis of patient diagnosis into DRGs where conventional treatment may require very different use of hospital resources. The Commission recommends that no action be taken on this issue at this time although it will be reevaluated as it becomes more widely adopted.

Infective Endocarditis was examined because of questions concerning the appropriateness of the reported geometric mean length of stay for DRG 126 and the generally recommended length of stay for treatment of this condition. When the differences between geometric and arithmetic averaging are considered, the geometric mean lengths of stay do not appear to be inappropriate for this DRG. For this reason, as well as the relatively small number of Medicare patients hospitalized with infective endocarditis each year, the Commission recommends that no further action be taken on the issue of infective endocarditis at this time.

Chapter 4

Areas for Further Study and Consideration

The Commission's recommendations focus on achieving both technical and general improvements in PPS within the context of today's changing health care environment. Beyond its recommendations, the Commission believes other issues require serious consideration in the future.

Areas for further study and possible future recommendations are presented in this chapter. The first major area discussed is measurement of case mix. Next, plans for analyzing the data and methods used to calculate the payment amounts are outlined. A number of other issues on the Commission's analytic and research agenda, such as measuring changes in quality of care and in the hospital product, are also described.

The legislative and executive branches are considering several health policy proposals. If these proposals are adopted, the Commission will reexamine its recommendations and proceed with additional analytic work. Some of these proposed policy changes are highlighted at the end of this chapter.

IMPROVING THE MEASUREMENT OF CASE MIX

The DRG patient classification system describes and measures hospital case mix and serves as the basis for payment under PPS. The system uses the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) coding system to categorize discharges into 468 DRGs. The strengths and limitations of ICD-9-CM as a disease and procedure coding system and DRGs as a measure of case mix, resource consumption, and hospital output need to be assessed further. The Commission has identified some of the potential weaknesses of DRGs as a case-mix measurement tool, as well as several issues relating to DRG classification and the setting of weights. Other issues have been raised by concerned individuals or groups and by Commission staff.

This section summarizes the general problems and specific diagnostic and therapeutic practices that will be the basis of a significant portion of the Commission's work. (For further discussion, see Technical Appendix C.)

General Areas for Further Analysis

There are several problems in using DRGs as a case-mix measure. These problems are organized into three basic topics:

- DRG construction and classification,
- PPS implementation policies, and
- Changes in medical practices and technologies.

DRG Construction and Classification

The Commission will evaluate the original data and methods used to construct DRGs to develop recommendations for improving case-mix measurement.

Data Bases Used for DRG Construction and Classification.—The DRG patient classification system was constructed using data bases intended to represent a national sample of hospitals. Some of these data may not have been precise enough to classify and group hospitals and patients accurately. In addition, the data bases may not have adequately represented certain types of hospitals or patient groups, and the construction and classification of DRGs may not appropriately reflect the national distribution of hospital and patient types.

Diagnosis and Procedure Codes.—DRGs are based on ICD-9-CM codes developed almost a decade ago. The codes are not scheduled for revision until the 1990s. Infrequent updating of diagnostic and procedure codes may be adequate for

the statistical uses of ICD-9-CM but inadequate for PPS. The Commission may want to consider an appropriate mechanism to add new codes reflecting changes in medical technologies, practices, and procedures before the scheduled revision of ICD-9-CM.

DRG Assignment Criteria.—Initial DRG partitioning is based on principal diagnosis and operative procedure. Further partitioning may be based on age, secondary diagnoses (complications and comorbidities), and disposition. There are several issues relating to the use of these variables in DRG construction and assignment and their potential effects when used for PPS.

- *Principal Diagnosis:* The initial partitioning in DRG assignment is based on the principal diagnosis for the discharge described by an ICD-9-CM code. When no single condition causes the patient's admission, there may be ambiguities in determining the principal diagnosis and in selecting an appropriate code. In addition, the principal diagnosis may not always be the most resource-intensive condition.

- *Operating Room Procedures:* In DRG assignment, discharges are initially categorized into one of 23 Major Diagnostic Categories (MDCs), according to the principal diagnosis. Then the MDCs are divided into 468 DRGs, depending upon the presence or absence of an operating room (OR) procedure and other factors. Several issues relating to the use of OR procedures in DRG assignment will be explored, including: (1) completeness, consistency, and accuracy of the list of OR procedures; (2) inclusion of new procedures; and (3) undesirable incentives that may result from the current use of OR procedures in DRG assignment.

- *DRG 468:* Performance of a procedure considered unrelated to the principal diagnosis generally places a discharge into DRG 468. This may lead to inappropriate DRG assignment and may result in DRG 468 being heterogeneous, both clinically and in terms of resource consumption. The assumptions used in relating specific procedures to particular MDCs and DRGs may warrant evaluation to ensure correct assignment of cases to DRG 468.

- *Secondary Diagnoses:* The DRG patient classification system uses secondary diagnoses to determine the presence of complications and/or comorbidities (CCs) in about 200 DRGs. Further analysis is required to determine: (1) completeness, consistency, and accuracy of the list of CCs; (2) how the sequence or combination of these secondary diagnoses affect DRG assignment; and (3) the ability of CCs to explain differences in resource consumption within DRGs.

- *Multiple Procedures or Multiple Diseases During One Admission:* Some patients may undergo several procedures or present multiple diagnoses during one hospitalization. PPS generally provides higher payments for separate admissions than for treating all existing conditions in one admission. This may create inappropriate incentives for some cases. Additionally, international coding rules dictate that some conditions or procedures are more accurately described by combinations of codes. The present use of one diagnosis and/or procedure code at any of the partitions in DRG assignment, rather than combinations of codes, requires further examination.

- *Patient Age:* In a number of DRGs, age is used for DRG assignment. The age breaks are generally 0 to 17 years, 18 to 69 years, and 70 years and more. Other age breaks may be more appropriate for determining DRG assignment for the Medicare population because they would create more homogeneous patient groups, clinically and in terms of consumption of resources.

- *Disposition:* Some DRG assignments include patient disposition such as transferred, left against medical advice, or died. For example, a few DRGs use death during hospitalization in the assignment criteria. Similarly, some DRGs use case transfer from one hospital to another in DRG assignment. The use of disposition in DRG assignment may warrant further analysis.

Homogeneity Within DRGs.—Cases grouped into a DRG may be dissimilar clinically or in terms of resource consumption. The data and methods used to estimate resource consumption may have been imprecise, resulting in inappropriate grouping of low resource- and high resource-consuming cases into certain DRGs. Some DRGs appear more clinically heterogeneous than others. The implications that varying degrees of heterogeneity may have for payment purposes require examination. Mechanisms for further minimizing differences within DRGs, such as stage or severity of illness distinctions, should be assessed.

Case-Mix Distribution Among Hospitals.—Certain institutions may treat a subset of cases within a DRG. Thus, their cases are substantially different than the distribution of cases typically in that DRG, making an average payment inappropriate. For example, hospitals offering very specialized services are more likely to treat cases using these services, which may skew the distribution of their cases within a DRG. Because resource consumption of cases may differ by type of institution, current payments may not be appropriate for all types of institutions.

Implementation Policies

Some problems in the use of DRGs are due to policies governing payment for certain types of cases. The Commission will examine these policies to determine whether changes would result in more accurate and appropriate payments.

Outlier Policy.—Problems may exist in both the criteria used to determine outlier status and the payment amount for these cases. Current payments for outlier cases may not accurately reflect increased consumption of hospital resources by these patients. This may be a particular problem for hospitals that treat many of these cases.

Indirect Medical Education.—An additional allowance is paid on the Federal portion of each PPS payment for discharges from hospitals with approved medical education programs. This allowance for indirect medical education costs serves as a proxy for a number of factors that may increase the cost of care in teaching institutions but that are not otherwise adequately recognized under PPS. The Administration has proposed reducing this allowance to half of its current level. Others argue that the indirect medical education allowance should be continued at its current rate until adjustments are made for the other factors, such as severity of illness, which were the basis for creating the indirect allowance. The Commission will continue to monitor the work in this area.

Transfer Policy.—In the data bases used to create DRGs, a transfer of a patient between two hospitals was recorded as two stays. These two stays were averaged with all other stays to set DRG weights. To the extent that transfers involved a very short initial stay and a longer stay at the discharging hospital, averaging may result in inappropriate payment for certain cases.

Use of DRGs by Other Third Party Payers.—The DRG categories were created using data from acute care hospitals generally. The standardized amounts and DRG weights, however, were set primarily using data from the Medicare program and reflect the costs of caring for Medicare beneficiaries. Several other private and public third-party payers have begun to use DRGs for payment. Because of its statutory mandate, the Commission will focus on changes in DRGs which serve the needs of the Medicare program. As a result, the changes recommended by the Commission may not necessarily be appropriate for the other payers. The extent to which the Commission will respond to the needs and problems of other payers is still unresolved.

Changes in Medical Practices or Technologies

Incorporating new or changing technologies and practices into an existing case-mix measurement system requires improved data and timely updating of the system. A mechanism may be necessary to determine DRG classifications and weights (prices) in the absence of historical data, so that diffusion of new devices or practices is not inappropriately retarded.

Coding of New Technologies or Practices.—When a new technology is adopted or a practice pattern changes which cannot be adequately identified by an existing ICD-9-CM code, new diagnosis or procedure codes may need to be created and incorporated into existing or new DRGs. An

expedited timetable for incorporating codes for new technologies or practices may also be desirable.

Distribution of New Technologies and Procedures.—A new and expensive device or procedure may be adopted by only a small number of hospitals. Thus, it may be inappropriate for the payment to all hospitals to reflect the cost of this device or procedure. The Commission is examining payment mechanisms that would not overcompensate or undercompensate hospitals for using these new technologies or procedures.

DRGs with High Device Costs.—DRG weights are based on resource consumption, including the use of sometimes costly devices. Hospital payments are adjusted to reflect differences in location, wage rates, medical education, and outlier cases. The Commission will examine the appropriateness of applying these adjustments to DRGs where the cost of the device is a substantial proportion of total patient care costs.

Diagnostic and Therapeutic Practices for Further Analysis

The Commission discussed the following specific issues illustrating the general areas described previously. Although information was insufficient to develop recommendations, the Commission intends to continue its analysis of these issues. In the future, the Commission will discuss and analyze additional issues as well.

Cyclosporine Used in Renal Transplantation

- Cyclosporine is a new drug that may improve outcomes for many organ transplantation recipients. It was approved by the Food and Drug Administration (FDA) in late 1983.
- Cyclosporine may alter the hospital resources required for patients undergoing transplantation, for both the initial length of stay and over the long term by preventing or lessening rejection episodes.

The Commission is primarily concerned about the impact of cyclosporine use on treatment of renal transplant patients. A Federal Task Force on Organ Transplantation was appointed in early 1985 to examine all issues related to organ transplantation including payment for transplantation and immunosuppressive medications. The Commission is monitoring work by the Task Force, as well as the Health Care Financing Administration (HCFA) and the American Council on Transplantation, as part of its continuing analysis.

Magnetic Resonance Imaging

- Magnetic resonance imaging (MRI) is a new diagnostic technology with many potential applications. Widespread use of this technology may alter resource consumption in many DRGs.
- MRI involves very large capital expenditures and generates high operating costs. It may substitute for other imaging technologies in some instances and, in others, may be added to the procedures now used.

MRI is the subject of ongoing research related to design, clinical applications, and cost. The Commission is continuing its analysis of the clinical applications, capital and operating costs, and the impact of this technology on quality of care. Alternative payment mechanisms for new technologies, particularly those involving multiple DRGs, will be examined as a general issue using MRI and other technologies as case studies.

Dual Joint Procedures in One Hospitalization

- Bilateral total hip replacements and other dual joint replacement procedures may be performed in two hospital stays or in one hospitalization for a subset of patients. A single hospitalization may involve two operations or one operation when both joints are replaced.
- DRG assignment and payment are the same whether one joint or two are replaced during a stay, although the resource inputs may be quite different.
- There are differing opinions in the medical community regarding patient selection and the efficacy of performing two joint replacements in one hospitalization. Available data bases contain little information on the extent of this practice and its associated costs.

Current payment policies may create incentives for two hospitalizations when one would be more appropriate. The Commission will examine the appropriateness of current payment mechanisms for admissions involving multiple procedures during one hospitalization. More current and complete data are being gathered by the Commission and by HCFA. The Commission will continue to consult with HCFA, review the data and methodologies, and make recommendations at an appropriate time when data are available.

Alcohol Dependence DRG

- The alcohol dependence DRG includes both detoxification and rehabilitation services. These treatments may require different hospital resource inputs in terms of both length of stay and type of services.
- Several studies are under way to furnish information on services provided for detoxification and rehabilitation, alternative classification systems for alcohol dependence, and effects PPS may have on services provided to patients.
- Alcohol and drug abuse hospitals and units are exempt from PPS until October 1985.

The current DRG classification may create inappropriately heterogeneous groups, clinically and in terms of resource consumption. The Commission recognizes that HCFA and others are conducting research on this issue. The Commission will consult with HCFA and other groups and use available data in making any recommendations regarding more appropriate DRG classifications or weights for patients undergoing treatment for alcohol dependence.

Cochlear Implants

- The cochlear implant is a new prosthesis that assists persons with certain hearing impairments. A single channel device was conditionally approved by the FDA in November 1984. A multichannel device is currently under review by the FDA for premarketing approval.
- This procedure has no specific ICD-9-CM code. Once the code is determined, it could potentially be assigned to the DRG for miscellaneous ear, nose, and throat surgery or the DRG for major head and neck surgery. The other procedures in these DRGs may involve very different use of hospital resources.
- When the Commission considered this technology, the single channel device had not received marketing approval from the FDA. To date, experience with this device has been limited.

The Commission will continue to examine the specific issues this topic raises as well as the general issue of payment for new technologies where cost and charge data are insufficient for appropriate DRG assignment and calculation of weights.

Extracorporeal Shock Wave Lithotripsy

- Extracorporeal shock wave lithotripsy (ESWL) is a new, noninvasive procedure that substitutes for invasive surgery for certain types of kidney stones.
- ESWL is a capital-intensive technology with high operating costs.
- This procedure has no unique ICD-9-CM code. To group cases involving ESWL into a DRG, a procedure code needs to be assigned, and ESWL has to be designated as either a medical or surgical procedure.
- When the Commission considered this technology in 1984, it had not received marketing approval from the FDA. In late 1984 the FDA approved ESWL for marketing, although only a few centers currently have units. Data concerning patient outcomes and the resources consumed by patients treated with ESWL are preliminary.

The Commission will continue to examine ESWL, in consultation with HCFA, and make recommendations when more data are available. The Commission will view ESWL as one of several illustrations of the general issue of payment for new technologies where cost and charge data may not be sufficient for determining appropriate DRG assignment and calculation of weights.

Dermatologic Disorders

- Cases classified into one of five DRGs related to dermatologic disorders may comprise inappropriately heterogeneous patient populations, clinically and in terms of resources required for their care.
- Cases with differing levels of severity of illness may not be evenly distributed among all types of hospitals, since certain institutions may treat more severe, resource-intensive dermatologic cases than others.

The Commission will examine potentially inappropriate classification of cases in these DRGs. In addition, it will examine the issue of unequal distribution of resource-intensive cases among different types of hospitals.

Cystic Fibrosis

- Cystic fibrosis (CF) patients may be inappropriately classified into DRGs with patients having less resource-intensive conditions.
- The data bases used to create DRG classifications and weights may have underrepresented certain patient and hospital groups.

Although the issue of CF is not of direct relevance for Medicare due to the small number of Medicare patients involved, the Commission will examine the general issues this topic raises.

Alternative Approaches to Case-Mix Measurement

The potential problems noted in using DRGs for PPS indicate the need to improve the case-mix measurement tool. The Commission will examine three broad approaches to improving case-mix measurement: (1) retain the current DRG system based on ICD-9-CM coding, but revise it in an incremental fashion as continued experience reveals problem areas; (2) retain the current system in principle, but reconstruct it using a newer and more complete data base; and (3) consider an alternative case-mix measurement system, either in conjunction with DRGs or to replace DRGs.

Incremental Change

Many problems could be corrected in an incremental fashion leaving the basic construction, classification, and weighting of the DRG system intact. Incremental change could involve improvements such as: splitting DRGs to create more homogeneous groupings; combining DRGs; examining different age breaks to find the ones that minimize variance in resource consumption; and incorporating new ICD-9-CM codes into the DRG system.

The Commission is concerned that changes be made only when they can be validated using the best available data. The incremental approach makes each of these changes somewhat separate and iterative. The cumulative effect of such changes may be a case-mix measurement tool that differs in many important respects from the current DRG system.

Reconstruction of DRGs

The Commission also will examine the possibility of reconstructing the DRG system using more current, accurate, and complete data. Improved data might resolve many of the problems noted such as identification of cases involving multiple procedures or diagnoses. DRGs could be reconstructed so that such cases are explicitly identified and grouped. When weights are calculated, payment would more accurately reflect the resource consumption of these cases.

Reconstruction could also facilitate certain health policy changes. For example, improved data would permit better identification of transfer patients and their consumption of resources. Based on this information, appropriate changes could be made in transfer policy.

The Commission recognizes that each time a change is made, there is a certain degree of administrative burden, for both HCFA and the hospital industry. Reconstructing the entire system, while involving major changes, might in the long run reduce the administrative burden more than an incremental approach. Reconstructing the sys-

tem need not preclude minor incremental changes that may be necessary over time, such as inclusion of new codes to identify new technologies.

Alternative Case-Mix Measurement Systems

The Commission will examine several case-mix measurement systems currently in various stages of research and development. They include disease staging, severity of illness, patient management categories, and systems based on physiological measurements in conjunction with other patient characteristics. These systems differ by type and number of variables used to group patients. The systems were developed for utilization review, reimbursement, quality assurance, and patient management. Such systems generally use either patient medical records or discharge abstracts as their main data source. For prospective payment purposes, such systems appear to fall into two groups: those that could be applied in conjunction with DRGs and those that could substitute for DRGs.

Systems Designed to Be Used in Conjunction with DRGs.—Several systems under development might improve DRGs. For example, systems that outline several stages of disease or severity of illness levels could segregate cases further to increase homogeneity. The underlying assumption of these systems is that patients in more advanced stages of disease require more hospital resources than patients who are less severely ill. Application of such a system in conjunction with DRGs might eliminate some of the flaws previously identified, although it would not necessarily address other DRG problems, since the existing system is modified but left essentially intact. This does not preclude the option of performing a reconstruction of the system at the same time.

Systems to Replace DRGs.—Rather than modifying the existing DRG system, alternative systems are under development that could replace DRGs entirely. It may be advantageous to implement a new, presumably better system that would not contain many of the flaws identified in DRGs. Any new system, however, might contain other deficiencies. While DRGs present certain problems, the benefits of this system are uncertain because it has been in effect for a relatively short time, initial flaws have not yet been corrected, and the transition to fully implemented PPS is not complete. The Commission is concerned that the momentum initiated by PPS not be interrupted. A major change, such as a new case-mix measurement system, should only be undertaken if it groups cases for payment purposes more accurately than the current system. This cannot be determined until the benefits and the problems of the DRG system are more fully assessed.

The Commission will examine the more fully developed alternative systems, both those that replace and those that complement DRGs. The ability of such systems to produce groups that are medically meaningful, statistically homogeneous, and reflective of resource consumption will be assessed.

IMPROVING THE CALCULATION OF PAYMENT AMOUNTS

Problems related to the lack of timely, accurate, and consistent data for setting payment amounts have been repeatedly discussed throughout this report. The Commission is concerned with these problems and plans to examine them more fully in the future.

The following section identifies specific problems associated with the data used to set the standardized amounts and to determine the DRG weights. In addition, this section outlines approaches the Commission will consider that are directed toward improving the calculation of the payment amounts.

Setting the Standardized Amounts

The standardized amounts are derived from data supplied on hospitals' Medicare Cost Reports. On the cost report, hospitals are required to record extensive information including ag-

gregate charges and aggregate costs by department and Medicare charges in each department.

The Commission has identified several problems associated with using aggregate cost information in calculating payment amounts for individual cases. Specifically, cost per case estimates generated from cost report data may not accurately reflect the cost of resources necessary to treat Medicare patients. This inaccuracy results from cost reporting practices such as:

- Lack of uniformity in reporting cost data,
- Limitations in the cost allocation process,
- Opportunities for manipulation of cost data, and
- Problems caused by the incentives of cost-reimbursement.

Furthermore, the most recent audited cost report data available at any given time are generally three years old.

In addition to the problems noted above, practices employed by the hospital industry to set the charges used in the calculation of cost-to-charge ratios included on the cost report do not necessarily correspond to actual resource costs. For example, many hospitals charge for operating room services based on an hourly rate (or some fraction of an hour). This method assumes that each hour of service consumes the same amount of resources. In actuality, however, different operating room procedures require varying amounts of personnel and equipment. Therefore, use of hourly rates results in underpricing and overpricing of services. (For further discussion, see Technical Appendix C.)

In setting payment, the process of standardization adjusts each hospital's average cost-per-case to place hospitals on a comparable basis. The Commission believes that improvements in the adjustments to account for differences in area wages, costs related to caring for a disproportionate share of low-income patients, and other costs related to the characteristics of hospitals and their patients, are necessary to make PPS payments more equitable.

During the next year, the Commission intends to examine in greater detail the limitations and inaccuracies of the data used to calculate and adjust the standardized amounts. Analysis will focus on the reliability of cost data as an indicator of resource consumption, the refinement of adjustments, and the collection of comparable data from all PPS hospitals. Moreover, the Commission will be developing options for future recalculation of the standardized amounts based on more recent data, as described in Recommendation 16 in Chapter 3.

Determining the DRG Weights

Establishing DRG weights involves the following data: (1) per-diem costs for routine and special care units (including nursing and other services); and (2) ancillary service costs and charges for revenue-producing departments of the hospital. Limitations of these data are described below. (For further discussion, see Technical Appendix C.)

Per-Diem Costs—Nursing Services

The method used to allocate nursing costs assumes that every patient uses the same amount of nursing resources per day, regardless of the patient's clinical condition and need for nursing care. The Commission has examined evidence suggesting that this method may have introduced significant inaccuracies in the DRG weights. Recalibration using charge data as recommended by the Commission for fiscal year 1986 would not correct this problem since the same assumption is made using per-diem charges. (For further discussion, see Technical Appendix C.)

The Commission's first concern regarding allocation of nursing costs relates to equity of PPS for Medicare beneficiaries and hospitals. If the DRG weights do not accurately reflect resource use, overpayment or underpayment for certain diagnoses may result. This issue is important because nursing costs represent a significant portion of a hospital's operating budget and an even larger share of its labor expenses. Depending on the case mix served, some hospitals may not be adequately compensated for services provided while others may receive payments in excess of their costs. Faced with these inequities in payment, hospitals may limit admissions or reduce services for patients requiring intensive nursing care. As a result, Medicare beneficiaries may receive lower quality care or have less access to services.

The Commission's second concern relates to the ability of the DRG patient classification system to account adequately for the severity of the patient's illness. It has been argued that more severely ill patients usually require a higher intensity of nursing care, resulting in higher hospital costs. Therefore, a more precise measure of nursing resource use may improve the DRG system's ability to reflect more accurately the variation in resource use among cases. If DRG weights were adjusted to reflect variations in nursing intensity among types of patients, payments would, presumably, be more equitable among hospitals. In addition, the perceived need for modifying the DRG system for illness severity may be diminished.

The Commission will analyze the current per-diem method for allocating routine and special care nursing costs to each DRG to determine whether the DRG weights accurately reflect the cost of nursing services. If not, alternative methods for allocating nursing costs on a diagnosis-specific basis will be explored. The Commission will also examine whether improvements in measuring nursing resource use may minimize the need perceived by some to adjust the system otherwise for severity of illness.

The Commission regards allocation of nursing costs as a sufficiently important issue to suggest that the Secretary of the Department of Health and Human Services also examine this topic. The Commission will collaborate with the Secretary to ensure that its efforts in this area are coordinated and mutually productive.

Per-Diem Costs—Other Services

Per-diem costs and charges also include housekeeping, dietary, laundry, and similar resources used by the patient during a stay. Therefore, the method for allocating these costs to DRGs may introduce some of the problems noted for nursing costs. In addition, the change in reimbursement policies may affect the accuracy of these costs. The previous cost reimbursement system provided the incentive to assign costs to inpatient services rather than to outpatient services in order to maximize reimbursement. The routine (Section 223) cost limits, however, restricted the hospitals' ability to attribute these costs to inpatient routine services. Prospective payment provides further incentives to assign costs to outpatient services.

The Commission will examine the methods used to derive per-diem costs and charges for other services to determine whether they are accurately reflected in the DRG weights. The Commission will also evaluate alternative approaches for allocating other service costs to DRGs if necessary.

Ancillary Service Costs

The limitations of Medicare Cost Report data and hospital charge-setting practices also affect the accuracy of allocating costs of ancillary services to DRGs. The cost-to-charge ratios used to assign costs for ancillary services may introduce errors in the calculation of the DRG weights and the payment amounts. This methodology, intended to provide a correction for interdepartmental variation in markups due to hospital price setting, may introduce overpricing and underpricing of DRG payment amounts.

The estimate of ancillary costs is derived by multiplying Medicare charges by the hospital departmental cost-to-charge ratio. For the six departments listed on the Medicare claim form, the actual cost-to-charge ratio is used. All remaining ancillary charges are aggregated into one "department," and an average cost-to-charge ratio is used. If the cases in a DRG have a significant number of ancillary services which are aggregated, this averaging process may lead to an inaccurate DRG weight.

Under the Commission's recommendation for recalibration using charge data, cost-to-charge ratios would not be used. However, hospital charge-setting practices might still distort relative DRG weights.

The Commission plans to examine the impact of hospital charge-setting practices and the cost-to-charge methodology on the assignment of ancillary service costs to DRG weights.

Approaches to Modifying DRG Weights

The Commission will continue to examine two general approaches to modifying the payment amounts: recalibration/reweighting and pricing.

Recalibration/Reweighting

The Commission considered several options for recalculating the entire set of DRG weights (recalibration) or a subset of the DRG weights (reweighting). For fiscal year 1986, the Commission recommends recalibration using the most recent charge data available. In the future, three alternative sets of data could be used for recalibration or reweighting: (1) costs and charges from the same year; (2) costs and charges from different years; or (3) charges only.

Ideally, cost and charge data from corresponding years should be used; the data should be as current as possible to reflect patterns of care and technology usage. Using data from different years results in applying the costs of services to charges for a different set of services and possibly introducing a new type of error into the rates. In addition, the Commission is concerned that the continued use of charge data alone to set DRG weights might offer opportunities for hospitals to manipulate the weights of some DRGs. It may be possible to continue to recalibrate using only charges if the incentives of PPS, data reporting requirements, or processing methods result in charges that more accurately reflect resource costs. If, however, evidence shows that significant cross-subsidization or other bias in setting charges still exists, an alternative method for determining DRG weights will be necessary.

During the next year, the Commission will examine this issue further to determine an equitable, accurate, and timely approach to recalibration and reweighting of the DRGs.

Pricing

As noted previously, there may be times when adjustments to individual DRG weights will be necessary in the absence of appropriate Medicare cost or charge data. In such cases, the Commission will explore the feasiblility of establishing prices for individual DRGs to support, or replace, the recalculation of one or more DRG weights. This method might be particularly useful in determining payment amounts for new medical practices or technologies in the absence of adequate cost and charge data.

DRG weights could be calculated by using information from manufacturers, professional groups, hospitals, and others to estimate the cost of care for a particular DRG. This cost estimate could then be converted to a DRG weight for payment. The pricing technique offers the advantage of using information from a variety of sources in addition to, or in place of, Medicare cost and charge data. Thus, this technique eliminates the problems previously outlined relating to the limitations of the Medicare data.

In summary, the Commission will examine the limitations of cost and charge information and the use of this information in setting the standardized amounts and the DRG weights. For example, to reduce lag time, the Commission may consider using information from cost reports as submitted (rather than waiting for auditing to be completed) or final reports from a sample of hospitals. Alternatively, the standardized amounts might be set by systematically developing uniform cost information from a sample of hospitals. The Commission plans to study these and other options to reduce the problems associated with the quality of cost and charge data and to improve the timeliness, accuracy, and equity of payments under PPS.

OTHER ISSUES TO BE CONSIDERED BY THE COMMISSION

Further analysis in the areas described previously is directed toward developing recommendations regarding specific improvements in case-mix measurement and the calculation of payment amounts. Other issues requiring further study are briefly discussed below.

Measuring Quality of Care and Health Outcomes

The Commission recognizes its statutory responsibility to monitor changes in the quality of care and health outcomes for Medicare beneficiaries. The assessment of these changes in terms of past and current practices will influence the Commission's future recommendations regarding DRG classifications and weights and the update factor for payments. In the formation of its analytic agenda, the Commission has placed high priority on assessing existing information, developing new data bases to make quality assessments, and improving current measures of quality of care and health outcomes. The Commission's data development and analysis will supplement the evidence gathered by Peer Review Organizations and the studies of quality of care by others in government and in the private sector.

Measuring Real Case-Mix Change

The Commission has recommended that the Secretary of the Department of Health and Human Services estimate and incorporate an allowance for real case-mix change occurring during fiscal year 1985 in the update factor for fiscal year 1986. The Commission recognizes that distinguishing changes in real case mix from those arising from altered coding practices is a difficult but important task. Therefore, it plans to monitor HHS's activities and to continue to consult with and make recommendations to the Secretary on this subject.

Measuring Change in the Hospital Product

PPS may contain incentives for changing the hospital product. Faced with these incentives, hospitals may substitute inpatient services with services provided in outpatient settings or other alternative sites of care. The Commission recognizes the importance of these hospital product changes in updating payment amounts, changing DRG classifications and weights, and affecting the health outcomes of Medicare beneficiaries. The Commission plans to develop methods for measuring changes in the hospital product and to monitor the effects of such changes.

Regional Practice Pattern Variations

The statute identifies regional variation in medical practice as an important consideration in making recommendations for updating and creating DRGs and establishing relative weights that accurately reflect appropriate differences in resources consumed. In addition, practice pattern variations contribute to the problems of defining the hospital product and measuring quality of care. The Commission will collect and assess information on these subjects with emphasis on variations involving costly or potentially inappropriate services.

Disproportionate Share Hospitals

The Commission has identified the need for specific adjustments for hospitals serving a high number of low-income patients to offset the higher costs of treating them. In its recommendations, the Commission has requested that HHS develop an appropriate definition of disproportionate share hospitals and a methodology for implementing an adjustment for such hospitals. The Commission will examine decisions made by the Secretary regarding the definition and treatment of disproportionate share hospitals. It will work cooperatively with HHS to develop appropriate definitions and methods of calculating adjustments to payment amounts.

Hospital Market Area Definitions and Wage Indexes

The Commission has recommended that the Secretary correct inadequacies in the current hospital market area definitions. The purpose of this correction is to better reflect hospital labor markets in the application of the hospital wage index adjustment to the payment amounts. In particular, the Commission has identified the need to distinguish between inner city and suburban areas within an MSA and between different rural areas within a state. The Commission will review the decisions made by the Secretary regarding this recommendation. In addition, the Commission will participate in studies regarding the magnitude of labor market differences in these areas and methodologies for drawing boundaries.

Effects of the Transition

The Commission recognizes the importance of the transition from payments based on hospitals' past costs to payments based on national averages. Over the next few months, the Commission plans to further analyze the impact of the transition on various types of hospitals. The effect of the transition will be assessed in light of concerns with the method currently used to determine the prospective payments as well as other policy changes. The analysis will use information that reflects, to the extent possible, changes in hospital behavior since PPS was developed.

Additional Analytic and Data Development Activities

The Commission will conduct and support research, as needed, to augment staff analyses regarding improvements in case-mix measurement and the updating of payment amounts. This may include, for example, further analysis of issues concerning the construction of the hospital market basket.

Finally, the Commission will consider other research topics that provide a broad view of the effects of PPS. A major effort will be a synthesis of data and anecdotal evidence on the effects of PPS on the health care system. This study will focus on changes in overall Medicare expenditures under PPS, for both inpatient and outpatient services. In addition, the study will include the effects of PPS on hospital behavior, operating structure, management strategies, and delivery of health care services.

The Commission is authorized by statute to collect and assess information to support the analytic agenda described above. To the extent possible, the Commission will carry out this responsibility using existing information, collected and assessed by its own staff, as well as analysis of others. It is also necessary for the Commission to award grants and contracts to support its data development, analysis, and research activity. Most Commission expenditures in these areas will be through open competition in response to grant solicitations or requests for proposals in a variety of areas relevant to PPS. Some portion of the budget will be for smaller projects obtained through limited competition or sole-source arrangements.

In forming its analytic agenda, the Commission identified a range of research issues and topics and established priorities among them. This process was guided by congressional statements of the role and responsibilities of the Commission. Two additional criteria will be used for defining the content and scope of each research effort. The first is the extent to which other organizations within the government and in the private sector are conducting research relating to each topic. Studies relevant to PPS will be monitored in the process of carrying out the research agenda to avoid duplication of efforts. The second is a consideration of the feasibility of each topic to ensure that analytic results contribute to the decision-making process of the Commission in terms of the content and timeliness of the research and the feasibility of completing the study at a reasonable cost.

The Commission's current extramural research agenda includes studies that focus on the specific topics previously identified. Data acquisition and data base construction are ongoing and will continue to be governed by the analytic priorities of the Commission.

OTHER POLICY CHANGES THAT MAY AFFECT PPS

The Commission's recommendations were developed in light of current PPS policies. There are a number of emerging issues in Federal health policy that may affect PPS hospitals and Medicare beneficiaries. The Commission recognizes its responsibility to respond to health policy changes; therefore, it is likely that additional issues will occupy its attention during the next year.

The Commission wants to note specific issues currently under discussion in the executive and legislative branches of the government and reported in the media. Many of these issues may have a profound effect on the overall impact and functioning of PPS.

In the Administration's fiscal year 1986 budget, it has proposed several actions which would significantly affect PPS. A major initiative would "maintain reimbursement under the prospective payment system" for fiscal year 1986 with rates at the level of those in effect for fiscal year 1985. Savings of $1.8 billion for fiscal year 1986 are associated with this proposal, which the Department of Health and Human Services anticipates implementing under current law. The Department further states that new legislation "will be sought if an application of current law does not achieve this level of savings."

Another Administration proposal having a major effect on PPS would "eliminate doubling of indirect medical education payments," with an anticipated savings of $695 million in fiscal year 1986. This proposal requires legislative change.

A final budget proposal submitted to the Congress would "freeze payment for direct medical education," with a savings estimate of $150 million for fiscal year 1986.

In addition to the Administration's budget proposals, Public Laws 98-21 and 98-369 contained provisions for further policy changes in PPS in the future. Although capital costs are passed through under current law, Pub. L. 98-21 requested a report by October 1984 on "methods and proposals for legislation by which capital-related costs, such as return on net equity, associated with inpatient hospital services can be included within the prospective payment amounts." Although this report has not yet been submitted, the Commission anticipates that the inclusion of capital within PPS will be a topic of extensive policy debate in the coming months.

The Congress also requested that the Secretary report and prepare legislative recommendations by July 1, 1985, "on the advisability and feasibility of providing for the determination of payments based on a DRG-type classification for physicians' services furnished to hospital inpatients." The inclusion of physician payments within a DRG-based system will be a critical topic for future policy debate.

Pub. L. 98-369 requires the Secretary to adjust the prospective payment wage index "taking into account wage differences of full time and part time workers," with such adjustments considering overpayments and underpayments retroactive to October 1, 1983. Potentially this would have a major impact on hospital payments under PPS.

These or other health policy changes may require the Commission to modify its analytic plans or reconsider certain recommendations. The Commission will consider policy changes in the context of its role, responsibilities, and priorities; the overall goals of PPS; and the distributional consequences of the alternatives.

The Commission believes it has a long-term role related to maintaining and updating PPS. In the future, significant changes will continue to occur that will influence the direction of health care delivery and financing. As these changes develop, additional items will be placed on the Commission's analytic agenda. These items will be examined and recommendations will be made, where appropriate, to the Secretary of the Department of Health and Human Services.

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