declined in the following three years of the prospective payment system. In the most recent years, 1989 and 1990, a period for which prospective payment system margins are expected to decline, overall community hospital margins have increased and currently maintain a level of 5.3 percent, equivalent to that experienced in FY 1983, the year preceding implementation of the prospective payment system.

The historical context suggests that hospitals have been rewarded well under the prospective payment system. Further, it suggests that an appropriate response to falling margins is to encourage hospitals to improve their cost containment programs. Finally, we believe that a balanced assessment of the history of the prospective payment system and the community hospital sector show that further restraint in increases in prospective payment system revenues of the magnitude recommended by the Secretary are justified and that such restraints have not, nor are expected to, be a threat to overall hospital financial viability. Therefore, we conclude that the one percentage point difference between the Secretary's recommendation and ProPAC's recommendation is justified.

Comment: We received several comments on the analytic framework used to support our update recommendation. One commenter took issue with the assumption used in the analytic framework that hospital productivity increased 1.0 percent in a year. ProPAC argued that the analytic framework should include an adjustment for within-DRG changes in case complexity. ProPAC also took issue with our reduction of 0.5 percent for changes in practice patterns on the basis that earlier recommended adjustments for site of care substitution were sufficient. Another commenter argued that there was no basis for assuming that average length of stay had decreased. One commenter suggested that we had no basis for supporting changes in case mix used in the analytic framework.

Response: We consider 1.0 percent annual productivity growth in the hospital industry to be a conservative normative standard that has widespread use as an indicator of hospital productivity improvements. Several studies over the years have resulted in conclusions that are not inconsistent with 1.0 percent annual growth. In particular, a study by ProPAC to develop alternative productivity measures found that productivity increased by approximately 1 percent per year over the period 1986–1988. Productivity increased relatively rapidly in the first two years of the prospective payment system, then declined before leveling at a rate of increase of about 1 percent.

We do not agree that a separate item in the analytic framework for within-DRG increases in case complexity is necessary. Changes related to within-DRG case complexity are reflected in scientific and technological advances and in the practice pattern components of the framework. Our estimate of overall real case mix change is supported by a study conducted by the RAND corporation.

Our estimate of change in practice patterns is proxied by our observation of cumulative changes in average length of stay since the beginning of the prospective payment system. Average length of stay declined dramatically during the first years of the prospective payment system and has gradually increased in subsequent years. We have made and will continue to make only gradual adjustments for this factor over time to avoid precipitous adjustments to the update amount. We have yet to adjust fully for the cumulative decline in average length of stay since the inception of the prospective payment system.

[FR Doc. 90–20677 Filed 8–31–90; 8:45 am]

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federal register

Tuesday
September 4, 1990

Part IV

Department of Health and Human Services

Health Care Financing Administration

Medicare Program; Model Fee Schedule for Physicians Services; Notice

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Care Financing Administration

[BPD-699-NC]

RIN: 0938-AE86

Medicare Program; Model Fee Schedule for Physicians' Services

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

ACTION: Notice with comment period.

SUMMARY: This notice announces and invites comments on a model fee schedule for physicians' services that is required by section 6102 of the Omnibus Budget Reconciliation Act of 1989. The model fee schedule provides *very preliminary* estimates for some, but not all, services to illustrate the effects of the Medicare physician payment fee schedule that will begin to take effect in January 1992. In accordance with section 6102(f)(11), we are making the model fee schedule available to the public through publication of this notice. Any comments received from the public will be considered carefully, but not specifically addressed in a subsequent proposed rule.

DATES: Comments should be received at the appropriate address, as provided below, no later than 5 p.m. on November 3, 1990.

ADDRESSES: Mail comments to the following address:

Health Care Financing Administration, Department of Health and Human Services, Attention: BPD-699-NC, P.O. Box 26676, Baltimore, Maryland 21207.

If you prefer, you may deliver your comments to one of the following addresses:

Room 309-G, Hubert H. Humphrey Building, 200 Independence Ave., SW., Washington, DC, or

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

Due to staffing and resource limitations, we cannot accept facsimile (FAX) copies of comments. In commenting, please refer to file code BPD-699-NC. Comments received timely will be available for public inspection as they are received, generally beginning approximately 3 weeks after publication of a document, in Room 309-G of the Department's offices at 200 Independence Ave., SW., Washington, DC, on Monday through Friday of each week from 8:30 a.m. to 5 p.m. (phone: 202-245-7890).

To obtain individual copies of this document, contact the following: Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 783-3238.

The charge for individual copies is $1.50 for each issue or for each group of pages as actually bound, payable by check or money order to the Superintendent of Documents.

FOR FURTHER INFORMATION CONTACT: Terrence L. Kay, (301) 966-4494.

SUPPLEMENTARY INFORMATION:

I. Purpose of this Notice

On December 19, 1989, the Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239) was enacted. Section 6102(a) of Public Law 101-239 amended title XVIII of the Social Security Act (the Act) by adding a new section 1848, Payment for Physicians' Services. New section 1848 of the Act provides for replacing the current reasonable charge payment mechanism of actual, customary, and prevailing charges with a resource-based relative value scale (RBRVS) fee schedule beginning January 1, 1992.

Section 6102(f)(11) of Public Law 101-239 requires the Secretary to develop a model fee schedule using the methodology set forth in section 6102(a), before implementing the fee schedule for physicians' services. Also, the Secretary is required to submit the model fee schedule by September 1, 1990 to the appropriate committees of Congress and to make it available to the public.

The task of developing the fee schedule is extremely complex and will have significant impact on Medicare payment for various physician services. While the law prescribes many of the procedures and methods to be used in developing the fee schedule and in moving to the new system, the Secretary must also resolve a number of key payment policy and technical issues. The model fee schedule (attached as an Addendum to this notice) lists and explains these issues and describes steps that have been taken or will be taken toward resolution of the issues. In many cases, alternate options, rather than specific choices, are offered for public consideration and comment. This approach underlines our earnest desire to solicit the views and build on the experience of physicians, beneficiary groups, and others in the public to produce a Medicare fee schedule that is workable and fair.

The law requires that the fee schedule be phased in beginning in 1992, becoming fully effective in 1996. The publication of the model fee schedule is the first major step in this process. As required by the law, this model does contain relative values for as many services as can be assigned those values based on data developed so far: about 1,400 procedures out of some 7,000 expected to be covered in the final fee schedule. However, it is important to point out that the relative values included in the model fee schedule are very preliminary and should be treated as illustrative only. The study team that developed these values is presently refining and expanding its study. Important policy and technical issues are unresolved. In addition, 1987 data was used in computing the values. Many, and perhaps all, of these values will change when the study team completes its work, policy issues are resolved, and more recent data becomes available.

The model fee schedule is a structure and a basis for ongoing consultation with the Congress, the PPRC, the health care community, beneficiary groups, and others affected by our payment system. This model reflects our current thinking and progress toward resolving the policy issues involved. With additional information and analysis, there will be refinements in our policies before publication of a proposed rule next year. We are committed to working closely and productively with as many interested parties as possible in this massive and important undertaking, and to implementing a Medicare physician fee schedule beginning January 1, 1992.

In accordance with section 6102(f)(11) of Public Law 101-239, we submitted the model fee schedule to the appropriate committees. To comply with the statute that the model fee schedule be available to the public by September 1, 1990, we are publishing it, in its entirety, as an Appendix to this notice.

An important purpose of this notice is to provide an opportunity for interested parties to review and comment on the model fee schedule as it exists on September 1, 1990. Therefore, we encourage comments on all aspects of the model fee schedule. We do not intend to respond to written comments on this notice for the reasons explained in section III of this notice. Nevertheless, we are requesting that comments be received within 60 days from September 4, 1990 to allow us to consider all comments before we begin preparing the proposed rule that will set forth the proposed requirements for the final fee schedule. We have set an April 1, 1991 target date for publishing the proposed rule.

II. Information Collection Requirements

This notice does not impose information collection and recordkeeping requirements.

Consequently, it need not be reviewed by the Office of Management and Budget under the authority of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.).

III. Responses to Comments

While written comments on this notice will be considered carefully as we develop the proposed rule for the actual fee schedule for physicians' services, we do not plan to publish a summary of written comments with responses as part of that proposed rule. If you wish to have your comments formally considered, they must be submitted to us in response to the proposed rule in accordance with the instructions specified in that rule. We will summarize and respond to written comments on the proposed rule when we publish the final rule.

(Section 1848 of the Social Security Act (42 U.S.C. 1395w-4))

(Catalog of Federal Domestic Assistance Program No. 13.774, Medicare—Supplementary Medical Insurance Program)

Dated: August 17, 1990.

Gail R. Wilensky,

Administrator, Health Care Financing Administration.

Approved: August 28, 1990.

Louis W. Sullivan,

Secretary.

Appendix—

Model Fee Schedule for Physicians' Services

September, 1990

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Chapter I—Introduction

A. Physician Payment Reform in the Omnibus Budget Reconciliation Act (OBRA) of 1989

A comprehensive package of Medicare physician payment reforms was included in the Omnibus Budget Reconciliation Act (OBRA) of 1989 (Pub. L. 101-239), enacted on December 19, 1989. Section 6102(a) of Pub. L. 101-239 amended Title XVIII of the Social Security Act (the Act) by adding a new section 1848, "Payment for Physicians' Services". This new section contains three major elements.

First, the current reasonable charge payment mechanism will be replaced by a fee schedule for physicians' services based on a resource-based relative value scale (RBRVS). The relative value of each service will be the sum of relative value units (RVUs) representing physician work, practice expenses net of malpractice expenses (overhead) and the cost of professional liability insurance (malpractice). Nationally uniform relative values will be adjusted for each locality by a geographic adjustment factor (GAF). (Only one-fourth of the physician work relative value is subject to adjustment.) The conversion factor (converting total relative value units into dollar payment amounts) is to be budget neutral, so that had the fee schedule applied during 1991 it would result in the same level of aggregate payments as would be made under the reasonable charge system. The new fee schedule will be phased in over four years, beginning in 1992, with the new rules fully effective in 1996. During 1992 through 1995 transition provisions generally blend the old payment amounts with the new.

Second, the statute establishes volume performance standard rates of increase for expenditures for Medicare physicians' services. The goal of these Medicare volume performance standards (MVPS) is to involve physicians in the effort to slow the high annual rate of increase in expenditures by having them evaluate more carefully the services they provide with an eye toward eliminating those that are inappropriate or ineffective. The fiscal year 1990 performance standard rate of increase of 9.1 percent was announced in December 1989.

For fiscal year 1991 and future years the new law prescribes a process as follows: (1) The Secretary of Health and Human Services (HHS) recommends an acceptable performance standard rate (or rates) of increase; (2) the Physician Payment Review Commission (PPRC) comments; (3) Congress either establishes the rate of increase or, if it does not act, (4) the standard is determined by the Secretary using a default mechanism. Following this process, on April 16, 1990, the Secretary recommended an 8.7 percent performance standard rate of increase for surgical services for fiscal year 1991 and a 10.5 percent rate for other services.

If expenditures for physicians' services under Medicare Part B exceed the established standard and if Congress does not act to update the fee schedule conversion factor, then under a default mechanism the amount of the annual update for a subsequent year will be reduced below what it would otherwise have been. The reduction in the update may not exceed 2 percentage points for 1992 and 1993, 2.5 percentage points for 1994 and 1995 and 3.0 percentage points thereafter. (Updating the conversion factor is explained further in chapter II).

Third, beneficiary financial protection from charges in excess of the Medicare fee schedule will be improved. The current maximum allowable actual charge (MAAC), which constrains the

total amounts that physicians can charge Medicare beneficiaries, will be replaced by a new limiting charge, beginning in 1991. This provision and other provisions of OBRA of 1989 of particular interest to Medicare beneficiaries are described in chapter VI.

B. Development of the Model Fee Schedule

The fee schedule for physicians' services is expected to make significant changes in payment amounts for thousands of Medicare-covered services provided by physicians. The fee schedule as enacted in OBRA of 1989 represents a fundamental revision of the basis for physician payment in Medicare as it existed since the origins of the program in 1965. Development of the concepts and methodology underlying this new payment system has been underway for a number of years. Based on Congressional mandates contained in Pub. L. 99–272 (Consolidated Omnibus Budget Reconciliation Act of 1985), Pub. L. 99–509 (OBRA of 1986) and Pub. L. 100–203 (OBRA of 1987), the Department of HHS and the Health Care Financing Administration (HCFA) have devoted considerable effort to the development of a physician fee schedule based on a relative value scale.

HCFA has been assisted in this task by a number of experts inside and outside government, including the research team at the Harvard University School of Public Health led by William Hsiao, Ph.D. The Harvard research team produced "A National Study of Resource-Based Relative Value Scales for Physician Services" (September 1988) under a cooperative agreement with HCFA. We would also like to acknowledge the invaluable contribution made by the PPRC. In developing this report, we have extensively utilized the PPRC's analyses and recommendations in formulating our own views.

Pursuant to the statutory mandates listed above, the Department of HHS and HCFA submitted three reports to Congress in October 1989 ("Volume and Intensity of Physician Services", "Relative Value Scales for Physician Services" and "Implementation of a National Fee Schedule") that summarized the results of extensive research and analysis relating to the possible implementation of a Medicare physician fee schedule based on an RBRVS. These reports reviewed both the theoretical and practical ramifications of the transition to a fee schedule and simulated the effects of the change under various assumptions.

Enacted 2 months after HHS submitted these reports, Pub. L. 101–239 required the Secretary to implement a fee schedule for physician payment, as described above. While the law prescribed many of the procedures and methods to be used in development of the new fee schedule and in the transition from the old system to the new, discretion was left to the Secretary to resolve a number of key payment policy and technical issues. The model fee schedule presented here will list and explain these issues and describe steps that have been taken and will be taken toward resolution of these issues prior to implementation. On some issues we are taking a position at this time; on others we are presenting options without identifying a preferred approach.

Section 6102(f)(11) of Pub. L. 101–239 requires the Secretary of HHS to develop a model fee schedule, using the methodology set forth in section 1848 of the Social Security Act with respect to the actual fee schedule. The model fee schedule is to include ". . . as many services as the Secretary concludes can be assigned valid relative values." It is to be submitted to appropriate committees of Congress and made available to the public by September 1, 1990.

An important purpose of the model fee schedule is to provide an opportunity for interested parties to review and comment on the fee schedule and its underlying assumptions as it exists on September 1, 1990, well before it is actually used as the basis for Medicare physician payment, beginning in January 1992. Therefore, the report that follows attempts to be as current, accurate, and complete as possible in providing the best available estimates of relative values, geographic practice cost index values, and other information which may be helpful in gauging the effects of the new payment system. This model fee schedule is, nonetheless, far from a complete and final fee schedule for Medicare physician payment. Because many relative values and other important data will not be available until later and because many policy and methodological issues are not fully resolved, *all estimates in this report must be viewed as very preliminary. Many and perhaps all of the estimated payment amounts that can be derived from the tables provided in the addenda will change, perhaps significantly, before the actual fee schedule is published in 1991. In addition, estimates for many services cannot be provided at this time.*

C. Differences Between Model Fee Schedule and Actual Fee Schedule

Many of the expected differences between the model fee schedule published here and the actual fee schedule to be implemented on January 1, 1992 relate to the status of the work of the Harvard study team, which is far from complete. The September 1988 Harvard team report, on Phase I of their study, provided relative values for physician work for about 1400 physician services, representing about two-thirds of 1987 Medicare allowed charges. This model fee schedule is based entirely on these results. Relative values for most of the remaining physician services, which would bring the total up to about 95 percent of Medicare allowed charges, are expected to be provided in the second phase of the Harvard study. Some of those results are expected to be available in the fall of 1990 and the remainder at the end of the year.

In Phase II, the Harvard team is not only surveying additional physician specialty groups, but also resurveying several of the specialties already surveyed. Thus any and all of the 1400 physician work RVUs presently available may change and thousands of RVUs have yet to be provided. Further, we have entered into an agreement with the Harvard study team for a Phase III, which is intended to help fill in the remaining gaps in RVUs available for fee schedule implementation. The precise timing of Phase III is not final at this time.

In addition, the relatively short time between enactment of OBRA of 1989 and the statutory deadline for the model fee schedule (about 9 months) has not permitted us to resolve many important and complex policy and technical issues associated with the fee schedule. These issues, which are explained in detail in the chapters that follow, include reform of visit coding, a uniform global surgery definition, integration of the existing radiology and anesthesiology payment rules into the new fee schedule for physician payment and the precise methodology for the fee schedule conversion factor. When these issues are resolved, some model fee schedule values will have to be adjusted accordingly for actual fee schedule implementation. Many procedure values are omitted entirely from the model fee schedule because no reasonable process for estimations is available at this time.

Further differences between model fee schedule values and final fee schedule values will result from the availability of more recent data. The model fee schedule conversion factor was

computed using 1987 Part B Medicare Annual Data (BMAD) data "aged" to represent 1988; these data do not include any of the statutory payment changes since 1988. The final fee schedule conversion factor will be based on the latest data available prior to publication of the final fee schedule in October 1991. Similarly, the national average allowed charge for each service in 1991 needed to compute the charge-based overhead and malpractice RVUs was estimated for the model fee schedule using 1987 BMAD data. These data were used for the model fee schedule because they were readily available, having been used for previous analyses. Use of existing data facilitated timely completion of the model fee schedule. *The model fee schedule values presented here should be treated as very preliminary.* By the time of the actual fee schedule, more recent data will be available and will be substituted.

Finally, the model fee schedule does not reflect the effects of the fee schedule transition provisions, which blend the old payment rates with the new for many procedures during the period 1992 through 1995. Depending on the historical payment patterns in individual localities, physicians may receive the fee schedule payment for a service in 1992 or a payment amount somewhere between the fee schedule amount and the average allowed charge. The model fee schedule includes only the estimated fee schedule amounts. The transition provisions are detailed in chapter IV below.

D. Plans for Actual Fee Schedule Publication

The Department expects to publish a Notice of Proposed Rulemaking (NPRM) for the fee schedule regulation by April 1, 1991, followed by a 60 day comment period. Our target date for the final regulation is mid-October 1991. This date will allow us to incorporate the most recent available data and should also allow adequate time for the Medicare carriers, which process claims for physicians' services, to make final adjustments to their systems prior to implementation on January 1, 1992. A participating physician enrollment cycle is scheduled for calendar year 1992. As has been our practice in the past, we intend to send physicians a "Dear Doctor" letter informing them of the program changes, the upcoming participation decision and sending them fee schedule rates for their highest volume procedures as specified in section 1848(h). We also intend to allow physicians sufficient advance notice to allow them time to predict impact of the changes on their practices prior to making their participation decisions for 1992.

As discussed later, certain data needed for the fee schedule, such as relative values for very low volume codes, may not be available in time for publication in the NPRM. In these instances, we will provide information in the NPRM on the methodology we will use to obtain these data prior to the October 1991 final regulation.

The Department encourages written comments on the model fee schedule published here and will consider such comments carefully as we develop the NPRM. However, we do not plan to publish a summary of written comments with responses as part of the NPRM or respond to comments individually. Instead, written comments on the NPRM will be summarized with responses in the final regulation.

Chapter II—Description of the Fee Schedule

A. Physicians' Services to be Included in the Fee Schedule

Section 1848(a)(1) of the Act (added by section 6102 of OBRA of 1989) requires that payment be made under a Medicare fee schedule based on an RBRVS for "* * * all physicians' services (as defined in subsection (j)(3)), * * *." Subsection (j)(3) of section 1848 of the Act defines "physician services" for purposes of the Medicare fee schedule as including:

"items and services described in paragraphs (1), (2)(A), (2)(D), (3) and (4) of section 1861(s) (other than clinical diagnostic laboratory tests and such other items and services as the Secretary may specify)."

The services identified in the law are as follows:

1861(s)(1)—"physicians' services"; these services are limited to the professional services of physicians as defined in sections 1861 (q) and (r).

1861(s)(2)(A)—"services and supplies . . . furnished as an incident to a physician's professional service . . .;"

1861(s)(2)(D)—"outpatient physical therapy services and outpatient occupational therapy services;"

1861(s)(3)—"diagnostic X-ray tests . . ., diagnostic laboratory tests, and other diagnostic tests;" and

1861(s)(4)—"X-ray, radium, and radioactive isotope therapy, including materials and services of technicians;"

If the service is currently paid based on reasonable charges, then payment will be made under the Medicare fee schedule regardless of whether a physician or other entity (e.g., an independently practicing physical therapist) provided the service. While the statute would permit us to specify certain services for exclusion from the fee schedule, we have chosen not to do so. Except for medical supplies covered incident to a physician's professional service and services for which no national code has been established (e.g., new procedures), there will be a national fee schedule amount specified for each service.

Covered drugs will continue to be paid as an add-on to the bill for the service to which they are incident. (Otherwise, outpatient drugs continue to be excluded from Medicare coverage.)

Payment for medical supplies provided as an "incident to" the physician's total service will be included as part of the payment made to the physician for his or her professional service. Non-drug supplies can be viewed as part of the practice expense component of a service.

As indicated in our discussion of local codes in chapter III, new procedures will be coded using a local carrier-unique code and will be paid under the fee schedule using relative values determined by the carrier until HCFA establishes a national code and value for the service.

Services of Optometrists, Dentists, Oral and Maxillofacial Surgeons, Podiatrists and Chiropractors

Optometrists, dentists, oral and maxillofacial surgeons, podiatrists and chiropractors are considered to be physicians by Medicare when they provide services specified by section 1861(r) of the Act. These types of physicians are often called "limited license practitioners".

Because they are defined as physicians by section 1861(r) for a limited range of services, and because the Medicare fee schedule applies to "physicians' services", the Medicare fee schedule applies to them when they provide specific services for which the law considers them to be physicians. In addition, section 1848(c)(5) of the Act prohibits the Secretary from imposing different relative values or a different conversion factor ". . . for a physicians' service based on whether the physician furnishing the service is a specialist or based on the type of specialty of the physician."

The question that arises under the Medicare fee schedule is whether these categories of physicians provide the same services when they bill under a procedure code that is also used by doctors of medicine and osteopathy. With the exception of chiropractors,

who have their own unique code, our inclination at this time is to consider the service the same and to pay the same amount whether performed by an M.D., D.O., or limited license physician. We are, however, continuing to review available information on the comparability of these services and expect to consult with the PPRC, physician groups, and the carriers regarding this issue.

Services of Nonphysician Practitioners

There are seven categories of nonphysician practitioners for whom there is separate coverage and payment under Medicare. They are:

- Physician assistant (PA),
- Nurse practitioner (NP),
- Certified registered nurse anesthetist (CRNA),
- Nurse midwife (NM),
- Physical/occupational/speech therapist (PT/OT/ST),
- Psychologist, and
- Clinical social worker.

Medicare coverage and payment rules vary for each of these practitioners. Under current payment rules, all of these practitioners have their payment amounts limited in some way by the amounts paid to physicians for the same service, with the exception of PT/OT/STs. (Independently practicing PT/OT/STs have their own customary and prevailing charge profiles under the existing reasonable charge system and are not limited by physician payment levels.)

All of these practitioners will be affected by the Medicare fee schedule in 1992. First, section 1848(j) of the Act defines physicians' services for payment under the Medicare fee schedule as including outpatient physical and/or occupational therapy services. These services will therefore be paid under the fee schedule like all other physicians' services.

Second, the payment limitation percentages for the services of PAs, NPs, CRNAs, and NMs expressed in present law as a percentage of prevailing charges or fee schedule amounts paid to physicians are continued by law under the fee schedule. These percentages range from 65 to 100 percent depending upon the practitioner, the service, and the site of service.

Third, clinical psychologists and clinical social workers will receive payments computed as a percentage of physician fee schedule payment amounts. Section 6113 of OBRA of 1989 broadened coverage of the therapeutic services of clinical psychologists to all sites of service and added coverage of the services of clinical social workers. The law gives the Secretary the authority to establish a fee schedule for paying the services of clinical psychologists. We expect to issue proposed regulations in the near future that will provide a methodology for computing payment of therapeutic services of clinical psychologists. Section 1833(a)(1)(F) of the Act, enacted by section 6113 requires that payment for the services of clinical social workers be derived in part from an amount equal to 75 percent of the payment amount for clinical psychologists.

Section 6102(e)(7) of OBRA of 1989 requires the PPRC to conduct a study of the effects of the fee schedule on nonphysician practitioners. The PPRC is required to report on the results of this study by July 1, 1991.

Provider-Based and Teaching Physicians

In general a provider-based physician (PBP) is a physician who is compensated by a provider (hospital, skilled nursing facility, or comprehensive outpatient rehabilitation facility) for patient care services. Direct medical and surgical services furnished to an individual patient in a provider setting by PBP are currently paid under part B on a reasonable charge basis (or, in the case of radiologist services, under the radiologist fee schedule) like all other physicians' services. Except for certain PBP physicians practicing in hospitals with approved teaching programs, in constructing customary charges for PBP services where there is a compensation agreement for patient care services, the carrier is required by regulations to base the customary charges on the amount of compensation the physician receives for the direct patient care services. These are referred to as compensation-related charges.

For example, assume that a physician is paid $100,000 for his full range of services. It is determined that 50 percent of his time is spent in direct patient care, that he renders only one type of service (e.g., interpretation of EKGs), and that he performed 1,000 of these services in the most recent year. The physician's customary charge would be the amount of his compensation attributed to direct patient care, $50,000, divided by the number of services, 1,000, or $50. Prevailing charges would then be constructed according to the usual methodology using customary charges of all physicians practicing in the provider setting in the same locality.

Under the fee schedule, PBPs will be for direct medical and surgical services on the same basis as other physicians. *There will no longer be any need for computation of compensation related customary charges since customary charges will no longer be the basis for payment for physicians' services once the fee schedule becomes effective.*

Although converting from the current payment system to the fee schedule may affect the amount of payment for a PBP, it will not change the requirements that must be met for the services of PBPs to qualify for payment as physicians' services under part B. That is, payment for phsyicians' services to patients of providers will be payable under the fee schedule only if, as under the present reasonable charge system, the services are personally furnished for an individual patient by a physician; the services contribute directly to the diagnosis or treatment of an individual patient; and the services ordinarily require the services of a physician. (Additional specific requirements apply for radiology, anesthesiology, and pathology services.)

In the case of teaching physicians (i.e. physicians who involve interns and residents in the care of their patients), there is a set of special payment rules for determining customary charges. Under the fee schedule, the payment level for teaching physicians will be the same as for all other physicians since customary charges are no longer applicable. However, the current coverage requirements in the regulations and operating instructions for determining when a teaching physician can bill for services performed by an intern or resident under his or her supervision will be continued under the fee schedule. In general, a charge by a teaching physician will be recognized for services as an attending physician when interns and residents are involved in the care of the physician's patients only if his or her services to the patient are of the same character, in terms of responsibilities to the patient that are assumed and fulfilled, as the services the physician renders to other patients. This attending physician criterion for teaching physicians will remain in effect under the fee schedule. (That is, the fee schedule changes the amount that Medicare pays, but not the services for which it pays.)

Section 1861(b)(7) of the Act and implementing regulations (42 CFR 405.465(a) and 405.521(d)(2)) currently allow a hospital to be reimbursed on a cost basis for the direct patient care services of teaching physicians if certain conditions are met. While the language of OBRA of 1989 did not specifically repeal this cost election provision, continuation of this election option would appear inconsistent with the overall purpose of the physician fee schedule. Clarifying legislation may be

needed to resolve this issue prior to fee schedule implementation in 1992.

8. Formula for Computing Payment Amounts and Its Components

Under the formula in section 1848 of the Social Security Act, payment amounts for particular services under the physician fee schedule are the product of three elements—a relative value for the service, a geographic adjustment factor for the locality, and a nationally uniform dollar conversion factor (budget neutral for 1992). This general formula can be expressed as:

$Payment_{ij} = RVUt_i \times GAFt_{ij} \times CF$

where

RVUt = total relative value units for the service

GAFt = overall geographic adjustment factor for the locality

CF = uniform national conversion factor

$_i$ = service

$_j$ = locality

The law also specifies that the total geographic adjustment factor for a locality is the sum of three components, relating to the three components of the total RVU for a service. The three components are: (1) physician work; (2) practice expenses or overhead such as rent, staff salaries, equipment, and supplies, exclusive of professional malpractice liability insurance costs; and (3) professional liability insurance or malpractice costs. The physician work RVU must reflect the resources required to furnish the service, including time and intensity of effort. The overhead and malpractice RVUs are based on historical data for overhead as a fraction of total physician revenue, weighted by specialty, applied to estimated 1991 average allowed charges under the customary, prevailing, and reasonable charge methodology. Separate geographic practice cost indices (GPCIs) have been developed for the three components of the fee schedule. The GAF is equal to a weighted average of these three GPCIs, as established by section 1848(e) of the Act as added by OBRA of 1989. Thus, when the GAF is expressed as the sum of its three components, the formula becomes:

$Payment_{ij} = RVUt_i \times [(GPCIw_j \times w_i\%) + (GPCIoh_j \times oh_i\%) + (GPCIm_j \times m_i\%)] \times CF$

where

$GPCIw_j$ = geographic practice cost index value reflecting one-fourth of geographic variation in physician work applicable in the locality

$GPCIoh_j$ = geographic practice cost index value for overhead expense applicable in the locality

$GPCIm_j$ = geographic practice cost index value for malpractice expense applicable in the locality

$w\%_i$ = work percentage for procedure i

$oh\%_i$ = overhead percentage for procedure i

$m\%_i$ = malpractice percentage for procedure i

The work, overhead and malpractice percentages are the fraction of the total RVUs for a service represented by the work, overhead, and malpractice RVUs, respectively; they sum to 100 percent.

In effect, what this statutory formula accomplishes is separate adjustment of each of the three components of the total RVUs for each service by the value for the locality of a GPCI specific to that component. (The statute specifies, however, that only one-fourth of the geographic variation in physician work resource costs is to be taken into account in the formula.) Then the three GPCI-adjusted RVU values are summed to produce a total RVU value, which is converted into a dollar payment amount specific to that service and that locality by application of a uniform, national conversion factor stated in dollars. Thus, for ease of computation and understanding, we have transformed the original formula stated above into an algebraic equivalent as follows:

$Payment_{ij} = [(RVUw_i \times GPCIw_{ij}) + (RVUoh_i \times GPCIoh_j) + (RVUm_i \times GPCIm_j)] \times CF$

where

$RVUw_i$ = physician work relative value units for the service;

$RVUoh_i$ = overhead relative value units for the service;

$RVUm_i$ = malpractice relative value units for the service;

Sources of each of these elements of the payment formula are explained in detail in the sections below.

C. Sources of Relative Value Units

1. Physician Work RVUs

Harvard Study RVUs. As mentioned earlier, the physician work RVUs that form the basis of the fee schedule were developed by a research team at Harvard University under a cooperative agreement with HCFA. A complete discussion of the methodology and results of that study is contained in the Harvard team's report (Hsiao, Braun, and Becker et al., 1988, available through the National Technical Information Service. See Addendum D for ordering information for this and other major reports related to the physician fee schedule). In addition, the Harvard team presented a summary of the study in the *Journal of the American Medical Association* (Hsiao, Braun, Kelly, Becker, October 1988). A summary of the results is also provided in the Secretary's October 1989 Report to Congress on "Relative Value Scales for Physician Services."

In essence, the Harvard researchers constructed an RBRVS by investigating the physician resource inputs used to produce physicians' services. They spent most of their effort quantifying the amount of the physician's work involved in producing a service. In the first phase of their study, vignettes or descriptions of physicians' services were developed for 409 services performed by one or more of 18 specialties (not limited to Medicare covered services) and assigned to the appropriate *Physicians' Current Procedural Terminology* (CPT–4) codes. Then a national random sample of approximately 185 physicians in each of the 18 specialties was selected. About 100 physicians in each specialty evaluated services described by each vignette in terms of requirements of work, time, and intensity, which consists of technical skill and physical effort, mental effort, and stress due to risk. A process of magnitude estimation was used to obtain measurements of intraservice work (i.e., work for the procedure excluding pre- and post-service time) and its dimensions relative to a reference standard procedure in each specialty. (Magnitude estimation is a technique that rates each dimension in relation to a reference service using a ratio scale.)

The survey data were used to create scales of relative intraservice work for each of the specialties. Then the specialty scales were linked by identifying same or equivalent services provided by several specialties. This process reduced the number of scales from 18 to 1 while keeping the relationships within the individual specialties essentially unchanged. Finally, estimates of pre- and post-service work (e.g., post surgical hospital visits) were added to yield total work values for each of the surveyed services. Extrapolation was used to generate relative work values for roughly 1000 CPT–4 that were not actually surveyed but that were closely related to surveyed procedures. For example, Harvard used charge data to extrapolate from surveyed results such as for a 3 graft bypass procedure to obtain results for a 4 graft bypass procedure.

• *Services included in Harvard Study Phase I.* In Phase I the Harvard study team set out to develop an RBRVS for 18 specialties: anesthesiology, family practice, general surgery, internal medicine, obstetrics and gynecology, ophthalmology, orthopedic surgery, otolaryngology, pathology, radiology, thoracic and cardiovascular surgery, urology, allergy and immunology, dermatology, oral/maxillofacial surgery, pediatrics, rheumatology, and psychiatry. While only 372 unique

services were investigated through the surveys, by extrapolation the Harvard team developed physician work RVUs for a total of 1400 services. These 1400 RVUs represent about 1200 unique codes in CPT–4 with relative values assigned to combinations of procedure codes and modifiers to enlarge the number of unique services to 1400. These services represent approximately 69 percent of Medicare allowed charges for the included specialties and approximately 67 percent of all Medicare allowed charges. These RVUs form the basis for this very preliminary model fee schedule and were used in reports to Congress and by the Physician Payment Review Commission (PPRC) in its recommendations to Congress. These RVUs, along with related overhead and malpractice RVUs which will be discussed later, are listed at Addendum B.

• *Additional services and resurveyed services in Harvard Study Phase II.* The Harvard team has entered into a second cooperative agreement with HCFA in which it will expand on its work from Phase I. Fourteen additional specialties will be investigated in the second phase of this study: cardiology, emergency medicine, gastroenterology, hematology/oncology, infectious diseases, nephrology, neurology, neurosurgery, nuclear medicine, osteopathy, physical/rehabilitation medicine, plastic surgery, pulmonary medicine, and radiation oncology. As part of Phase II, HCFA is also funding resurveys of general surgery, internal medicine, and orthopedic surgery. Organizations other than HCFA are funding resurveys of dermatology, ophthalmology, pathology, and psychiatry. These RVUs should be available to the Secretary by December 1990, in time for inclusion in the NPRM.

In addition, the Society of Thoracic Surgeons has entered into an agreement with Abt Associates to develop RVUs for the services its members most frequently perform. These RVUs should also be available for consideration by the Secretary in the fall of 1990. This work could prove helpful to HCFA in refining the RVUs for thoracic surgery.

Obtaining RVUs for Other Procedures. Phase II of the Harvard study will provide RVUs for physician work for services that represent about 95 percent of Medicare allowed charges. We have recently awarded supplemental funds for Harvard to implement a Phase III wherein work values will be developed for the remaining CPT–4 codes and certain HCPCS alpha-numeric codes. We are also developing a charge-based relative value scale which could be reviewed by carrier medical directors and used for filling any remaining gaps (e.g., the values for the single covered chiropractic service or the several covered dental services not listed in CPT–4).

Refinement of Harvard Values

Section 1848(c)(2)(A) of the Act as added by OBRA of 1989 authorizes the Secretary to establish the relative values for the physician fee schedule after taking into account recommendations of the PPRC and consulting with organizations representing physicians. During Phase II of the Harvard project the methodological assumptions used in Phase I are being re-examined, particularly with respect to extrapolation. During Phase III Harvard will convene expert panels of physicians to "gap fill" values for low volume and new codes and to reexamine the relative values for all codes. We expect Harvard's recommendations for refinements in the physician work RVUs to be provided by June 30, 1991. We intend to provide further information about this process in the April 1991 NPRM.

PPRC plans to conduct a formal multi-step refinement process involving representatives from various physician organizations, HCFA, and Harvard researchers that will begin when Phase II of the Harvard study is complete in the fall of 1990. Specialty societies will be asked to identify problems related to the physician work relative values for surveyed services, to the cross-specialty links, and to the families of services and benchmark services used in the extrapolations. PPRC will also convene specialty-specific advisory panels of physicians to help it refine physician work RVUs developed through extrapolation. PPRC plans to complete most of the refinements by the summer of 1991.

Completion of these various RVU refinement efforts by June 30, 1991 is crucial if these refinements are to be considered for inclusion in the actual physician fee schedule to be phased in beginning in January 1992. This lead time is necessary to allow calculation of the conversion factor and dissemination of the final fee schedule amounts to the carriers in time for all necessary systems changes and other preparations for the January 1, 1992, effective date.

RVUs for Limited License Practitioner Services

Although limited license practitioners perform many of the same services as M.D.s and D.O.s and bill using the same codes, some codes are unique to the limited license practitioners. For codes that overlap with those of M.D.s and D.O.s, we either have physician work RVUs from Harvard Phase I or expect to receive them as part of Harvard Phase II or subsequent work. One of the limited license specialties (oral surgery) was surveyed as part of Harvard Phase I. A few limited license practitioner services that are covered by Medicare are outside the CPT–4 coding system and presently paid under HCFA-developed alphanumeric HCPCS codes (e.g., manipulation of the spine by a chiropractor).

Harvard will provide RVUs for services performed by doctors of medicine, doctors of osteopathy and for a few services performed by oral surgeons. These RVUs will apply to all physicians who perform these services (e.g. podiatrists, optometrists). As discussed in more detail under *Obtaining RVUs for Other Procedures,* we expect to establish payment amounts for services for which Harvard does not provide RVUs through other means.

Treatment of Radiology Services

• *Existing Fee Schedule Based on ACR-Provided Values.* Section 1848(b)(2)(A) of the Act, as added by OBRA of 1989, acknowledges that special rules are already in effect with respect to payment for radiologist services. Under the provisions of Public Law 100–203 (OBRA of 1987), later amended in part by provisions of Public Law 100–360 (the Medicare Catastrophic Coverage Act of 1988), payment for certain radiological services furnished on or after Janauary 1, 1989 was to be equal to 80 percent of the lesser of the actual charge for the services or the amount set under a new radiologist fee schedule. The radiologist fee schedule applies to radiology services (as defined by regulation) performed by board-certified or board-eligible radiologists or any other physician for whom radiology services account for at least 50 percent of the total amount of charges made by the physician for Medicare Part B services. (The radiology services of other physicians continue to be payable under the customary, prevailing, and reasonable charge methodology, although, effective April 1, 1990, payment for over 90 radiology procedures is limited to the radiologist fee schedule amount under the "designated specialty" provision. Imposed by section 1842(b)(15) of the Act as added by OBRA of 1989, this rule is applied in carrier localities in which prevailing charges differ by physician specialty.)

Radiologist fee schedule values are based on a relative value scale

developed by the American College of Radiology, which conducted both surveys of radiologists and a consensus panel process for refinement and extrapolation of the survey-generated values. The conversion factor for the radiologist fee schedule varies by carrier locality, reflecting historic charge patterns—the best proxy for a geographic practice cost index available at the time of implementation. As required by law, the initial fee schedule conversion factors were developed so as to produce total payments for the radiologists under the fee schedule that were 3 percent less than would have occurred under a continuation of the customary, prevailing, and reasonable charge system. Thus the radiologist fee schedule was budget neutral less 3 percent, locality by locality. OBRA of 1989 further reduced conversion factors by 4 percent in 1990. Future updates in payment amounts were to be based on the percentage increase in the Medicare Economic Index (MEI).

• *Integration of Existing Radiologist Fee Schedule into OBRA of 1989 Physician Fee Schedule.* In establishing the overall physician fee schedule, section 1848(b)(2)(A) of the Act (added by section 6102 of OBRA of 1989) specifies for radiology services that "the Secretary shall base the relative values on the (existing radiologist fee schedule), with appropriate modifications of the relative values to assure that the relative values established for radiology services which are similar or related to other physicians' services are consistent with the relative values established for those similar or related services". This language indicates that while the relationships among the radiology service RVUs established in the existing fee schedule are to be preserved, the entire radiologist fee schedule is to be rescaled to link radiology services to equivalent nonradiology physician services in the overall physician fee schedule, which is based primarily on the Harvard study physician work relative values.

We see two general approaches to this rescaling: (1) Rescaling the entire radiologist fee schedule across the board, or (2) rescaling major categories of radiology services separately. In order to do this rescaling, we must first determine what value from the existing radiologist fee schedule is equivalent to the Harvard physician work RVU for a given service. This determination is complicated by the fact that radiology services have professional and technical components and may also be billed globally. Briefly, the "professional component" of a service is the professional service provided by the physician (e.g., reading a chest x-ray), while the "technical component" includes the specialized supplies, equipment and staff that are necessary to do the service (e.g., the creation of the film to be read).

Because of this complexity, a plan for crosswalking from the existing radiologist fee schedule components (global, professional, and technical) to the new physician fee schedule components (physician work, overhead, and malpractice) must be developed in order to integrate the existing fee schedule values into the new system. Our plan is explained in chapter IV. For example, rescaling under either approach could be done in a manner similar to the following simple example, which uses the average RVU as the base. In practice, we would probably use a weighted average based on allowed charges.

PHYSICIAN WORK RVU

Code	Existing fee schedule	Harvard study
a	2	1
b	5	2
c	9	3
Mean	5.3333	2

Convert RVUs for existing fee schedule to Harvard scale as follows:

(1) Standardize current RVUs by dividing scale by mean RVU;

a	0.375
b	0.9375
c	1.6875

then, (2) place all values on Harvard scale by multiplying by Harvard mean RVU of 2.

a	0.75
b	1.875
c	3.375

Unresolved Coding Issues

There are several unresolved issues associated with the current Medicare fee schedule for radiologist services that result from differing past payment practices among carriers under the reasonable charge system. Some of these divergent payment practices were continued on a temporary basis under the initial implementation of the radiologist fee schedule with the understanding that standard payment procedures would be established at a later date. We will need to standardize these policies as a part of physician fee schedule implementation.

One area of divergent payment practices involves interventional radiological services. Many interventional radiological procedures have dual CPT–4 codes differentiating between the "complete procedure" (the radiological aspect of the procedure plus the injection of contrast materials and other pre-injection and post-injection services) and the "supervision and interpretation (S&I)" portion (the radiological aspect) of the complete procedure.

Under the CPT–4 coding descriptions, when a physician furnishes all aspects of the interventional procedure, the physician should use the complete procedure code in billing for the procedure. However, where the complete procedure is furnished by a radiologist-nonradiologist physician team, the S&I code should be used for the radiological portion of the procedure while the other services are billed using nonradiological codes. Thus, the latter services are payable on a reasonable charge basis even though the S&I portion of the complete procedure became payable under the radiologist fee schedule beginning April 1, 1989.

In the process of developing payment procedures for the radiologist fee schedule, HCFA discovered that the individual practices of Medicare carriers varied in the application of these codes. Some carriers permitted or required radiologists who performed complete procedures not to bill the single complete procedure codes. Therefore, those physicians split their billings between the S&I radiologic codes and surgical or other nonradiologic codes even though they furnished the complete procedure. The national organizations representing physicians who furnish interventional procedures strongly advocated the continuation of this component-part billing and the exclusion of complete procedure codes under the radiologist fee schedule. It was decided that individual carriers' past practices regarding the strict application of the CPT–4 coding descriptions would be continued during the first year of the radiologist fee schedule. Subsequently, section 6105(c) of P.L. 101–239 required that this "freeze" policy on component-part billing continue to be applied in 1990 on the same basis as it was applied in 1989.

We intend to propose our approach to standardizing payment procedures on interventional radiological services in the proposed rule on the Medicare fee schedule. Our main concern will be that, in the chosen option, Medicare will pay the same amount for the services

furnished regardless of how the services are billed.

A second area of divergent payment procedures under the radiologist fee schedule involves payments for the delivery of radiation therapy services that recognize the type of equipment used in treating individual patients. The CPT–4 coding system has not generally based its procedure descriptions on the type of radiation therapy equipment used. (Essentially, this is an issue that affects payments only for the technical component of these procedures since the professional component services are largely unaffected by the equipment used.)

In the past, several carriers, primarily located in one area of the country, instituted local codes that specified the type of equipment for use in paying for radiation therapy services. Because of the long-standing status of those local codes, certain carriers who factored them into the radiologist fee schedule conversion factor calculations were permitted to continue to recognize them for payment purposes. The use of these local codes was restricted to freestanding radiation therapy centers that billed only for the technical component of radiation therapy services. In general, no other equipment-specific differentials are made.

Since the use of local codes except in very limited circumstances is incompatible with a national payment system, we plan to propose an approach to standardizing payment policy for radiation therapy services in the Medicare fee schedule proposed rule. The options are a uniform payment amount without an equipment-specific differential or national codes and relative value units that provide for such differentials in payment amounts. If the latter option is selected, the payments will be based on the level at which the equipment is used with respect to an individual patient rather than the overall capacity of the unit, since the most powerful units can provide the lower-range services as well as the highest.

Treatment of Anesthesia Services

• *Existing Relative Value Guide and Payment Methodology.* Anesthesia services are paid on the basis of a reasonable charge that is determined by multiplying a reasonable charge conversion factor by the sum of allowable base and time units. The base unit is a specific numerical value assigned to the anesthesia procedure. The time unit is calculated from the amount of "anesthesia time" assigned with the anesthesia procedure.

Prior to March 1, 1989, each carrier was allowed the choice of relative value scale which led to considerable variation across the carriers in the number of base units allowed per procedure. In addition, with the exception of a few carriers, surgical codes, not anesthesia codes, were used to report anesthesia services. Section 4048 of OBRA of 1987 mandated that the Secretary develop a uniform relative value guide for physician anesthesia services. Consistent with this requirement, a uniform guide was developed and implemented effective March 1, 1989.

Under the uniform relative value guide, each CPT–4 anesthesia code is assigned a base unit value. There are approximately 250 anesthesia codes. The number of base units varies from a low of three units for a procedure such as anesthesia for biopsy of clavicle to a high of 30 units for anesthesia for a liver transplant. The base unit reflects the value of all physician anesthesia services except the time actually spent in anesthesia care. The base value includes usual preoperative and post-operative visits, the administration of fluids and/or blood incident to the anesthesia care and monitoring procedures. The base unit for an anesthesia procedure that is medically directed by a physician differs from the base unit for an anesthesia procedure that is personally performed. For anesthesia procedures furnished on or after April 1, 1988 but before January 1, 1991, the base unit is reduced by 10 percent for each of two concurrent medically directed procedures, by 25 percent for each of three concurrent medically directed procedures, and by 40 percent for each of four concurrent medically directed procedures. Medical direction refers to the situation where an anesthesiologist provides medical direction to qualified anesthesists who actually administer anesthesia.

Anesthesia time starts when the physician or anesthetist begins to prepare the patient for induction and ends when the patient may be safety placed under post-operative supervision of others and the physician or anesthetist is no longer in personal attendance. The number of allowable time units is calculated by dividing anesthesia time by a denominator of 15 or 30 minutes. The denominator of 15 minutes is used where the physician personally performs the anesthesia procedure. The denominator of 30 minutes is used where the physician medically directs concurrent anesthesia procedures involving qualified anesthetists. As a result of section 1842(q)(2) of the Social Security Act, as enacted by section 6106 of OBRA of 1989, only the actual time of the fractional time unit is allowed for anesthesia services furnished on or after April 1, 1990. Previously, a fractional time unit was considered a full time unit.

The following examples describe how the reasonable charge is determined for an anesthesia procedure that is personally performed and an anesthesia procedure that is medically directed by a physician on or after April 1, 1990.

Example 1

An anesthesiologist personally performs an anesthesia procedure that is assigned 8 base units. The "anesthesia time" associated with this particular procedure is 1 hour and 10 minutes, or 70 minutes. The anesthesiologist charges $455. The anesthesiologist's customary charge conversion factor is $30 and the prevailing charge conversion factor is $20. The reasonable charge is $254 or $20 × (8 + 4.7 units). (The amount of 4.7 units is calculated by dividing anesthesia time of 70 minutes by 15 and rounding to one decimal place.)

Example 2

An anesthesiologist medically directs two concurrent anesthesia procedures. One of these procedures is assigned 10 base units. The anesthesia time associated with this particular procedure is 2 hours and 40 minutes or 160 minutes. The anesthesiologist charges $528. The anesthesiologist's customary charge conversion factor is $32 and the prevailing charge conversion factor is $22. The reasonable charge is $314.60 or $22 × (9 + 5.3 units). (The amount of 5.3 time units is calculated by dividing anesthesia time of 160 minutes by 30 and rounding to one decimal place. The amount of 9 base units is calculated by reducing the assigned base unit of 10 units by 10 percent, the percentage reduction factor for two concurrent medically directed procedures.)

The provision of anesthesia services may involve general or monitored anesthesia care (MAC). Under MAC, a patient may be anesthetized by the surgeon or anesthesiologist, using a local or regional anesthetic, while the anesthesiologist continually monitors or medically directs the monitoring of the patient's condition. Payment for medically necessary MAC services is made in the same manner as for general anesthesia.

The OIG has prepared a draft report entitled, "Medicare Coverage and Reimbursement for Monitored Anesthesia Care." This report makes the following recommendations:

• Require carriers to develop and implement a claims review process to apply existing MAC coverage instructions;

• Strengthen MAC coverage guidelines through consultation with medical specialty societies;

• Study the appropriateness of paying the same amount for MAC and general anesthesia.

We are reviewing the OIG recommendations and determining what changes, if necessary, need to be made to our current instructions.

• *Integration of Anesthesia Services into the Physician Payment System.* Section 1848 of the Social Security Act contains a specific provision governing payment for anesthesia services under the physician fee schedule. Section 1848(b)(2)(B) requires that the Secretary shall use, to the extent practicable, the uniform relative value guide, with appropriate adjustment of the conversion factor, in a manner to assure that the fee schedule amounts for anesthesia services are consistent with the fee schedule amounts for other services determined by the Secretary to be of comparable value. In addition, the Secretary shall adjust the anesthesia conversion factors by geographic adjustment factors in the same manner as the adjustment is made for other physician services.

The inclusion of actual time is unique to anesthesia services. The preamble to the January 26, 1989 proposed regulations to implement the uniform relative value guide announced that the separate time unit element of the anesthesia payment system would be eliminated within 2 years of the effective date of the final rule implementing the uniform relative value guide. (The final rule has not yet been published.) The reason for this was in part, concern that the definitions of when anesthesia time "begins" and "ends" is not precise and that a system that reflects average time units per procedure would be simpler to administer and have less potential for abuse. On the other hand, anesthesiologists argue that the use of actual time is more equitable in that those anesthesiologists who work on more complex procedures or with "slow" surgeons are not penalized when a procedure takes longer than the average time. It is our judgment, however, that the payment system for all physicians is based on a system of averaging (i.e., that within a given procedure code, there will be some easy and some more difficult cases) and no persuasive data have been provided to us to support a conclusion that incorporating average time units per procedure anesthesia code will lead to inequitable results.

Another argument favoring the elimination of time is the complexity that is involved in integrating the anesthesia relative value scale into the overall RBRVS. We have concluded that if anesthesia time units are to be retained, the following process is needed to integrate anesthesia services into the overall physician payment system. Note that this requires separate conversion factors for anesthesia.

Method for Integrating Anesthesia Services Retaining Time Units

1. Compute a conversion factor under the physician payment system for all physicians' services, anesthesia and non-anesthesia alike, based on the Harvard work values. Phase I of the Harvard study developed work values for 23 anesthesia services. Anesthesia allowed charges for these 23 anesthesia services will be weighted to represent total allowed anesthesia charges.

2. Compute the payout under the physician fee schedule for the work component of physician anesthesia services.

3. Compute the amount of the payment adjustment percentage for the work component of physician anesthesia services. The percentage adjustment will be determined based on the difference between payment for the work component of physician anesthesia services allowed under the reasonable charge system and payment for the work component of physician anesthesia services allowed under the fee schedule.

4. Divide each locality level conversion factor into three component amounts using anesthesiology-specific component weights for work, malpractice and overhead. Reduce the work component of the locality conversion factors by the adjustment factor. The practice component and the malpractice component remain unaffected and are passed through. (The work component weight will have been adjusted to reflect the payment adjustment for anesthesia services.) Deflate each of the three components by dividing the specific component by its appropriate geographic index. Sum the components.

5. Compute a national index adjusted conversion factor by weighting each locality indexed adjusted conversion factor by its total allowed units for a period of time.

6. For each fee schedule area, multiply the national index adjusted conversion factor by the sum of the products of the appropriate index and its specialty weight. The resultant amount is the fee schedule area anesthesia conversion factor.

Data Required To Eliminate Time

In order to eliminate time as a separate element of the payment process and to integrate the anesthesia relative value scale into the overall RBRVS, we would have to develop an average time per procedure for both personally performed and medically directed procedures. Research work is currently being conducted to develop these data. Assuming that this proves successful and data are available by early 1991, we are announcing our intention to propose the elimination of time units as part of the April 1991 NPRM.

The anesthesia relative value scale would then be integrated with the overall RBRVS as follows: From the average time unit per procedure, we would develop a combined base/time unit value per procedure. Such values would be adjusted to reflect the degree that the surveyed anesthesia services are over or underpriced on average and then integrated into the overall RBRVS.

• *Other Anesthesia Issues.* The uniform relative value guide covers only anesthesia services. During the provision of the anesthesia service, the anesthesiologist may furnish other services such as surgical and medical services. Examples of these services include the insertion of a Swan Ganz catheter, and the insertion of an arterial line or a central venous catheter. There is currently a lack of uniformity among carriers in how these services are paid. Some carriers do not recognize separate payment for these services when they are associated with the anesthesia procedure. These carriers view the anesthesia payment as representing payment for all anesthesia and related care services furnished by the anesthesiologist. However, other carriers do recognize separate payment for these services. Under the physician fee schedule, we will need to develop a standardized national policy regarding this issue.

Under one option being considered, we would require each carrier to recognize separate payment for these services. This would be consistent with the practice of the majority of carriers. This would require those carriers that do not currently recognize separate payment to decrease their conversion factors in order to allow separate recognition. Alternatively, we would require each carrier to include these services with the anesthesia payment. When these services are performed by an anesthesiologist in concert with the

anesthesia service, payment for these services would be included as part of the anesthesia fee. This would require those carriers that do currently recognize separate payments to increase their conversion factors. A problem with this approach would be how to adjust the anesthesia fee when a physician, other than an anesthesiologist, performs this service.

Treatment of Physician Pathology Services

In addition to requiring implementation of a resource-based fee schedule for physicians' services beginning in 1992, section 1834(f) of the Social Security Act, as enacted by section 6102(g) of OBRA of 1989 requires implementation of a fee schedule for physician pathology services. This provision is effective beginning January 1, 1991. Although OBRA of 1989 explained how radiology and anesthesia services would be incorporated into an overall resource-based fee schedule in 1992, it did not explain how the pathology fee schedule would be incorporated.

Phase I of the Harvard study included only a very limited survey of pathology. This is one of the areas being resurveyed by Harvard, and results are not anticipated until the end of 1990. We, therefore, have only partial and preliminary data on the resources required to provide physician pathology services. If we did develop a pathology fee schedule for implementation in 1991, it would probably be based on existing charge data because of the unavailability of the new Harvard data at this time. Payment amounts in such a fee schedule might bear no relationship to the resources required to provide the service.

Both the PPRC and organizations representing pathologists, such as the College of American Pathologists (CAP), have recommended that Congress reconsider requiring HCFA to establish a pathology fee schedule in 1991. They believe that physician pathology services should instead be included in the resource-based fee schedule in 1992 along with all other physician services, and no other fee schedule should be established for pathology prior to that time, given that Harvard's resurvey of pathology as part of its Phase II study will not be available until late this year. The Ways and Means Subcommittee on Health has approved a provision to repeal the pathology fee schedule for 1991. In expectation of forthcoming legislation, we have stopped work.

2. Charge-Based Computation of Overhead and Malpractice RVUs

While physician work RVUs are determined based on an RBRVS, section 1848(c)(2)(C) of the Act as added by OBRA of 1989 prescribes that the Secretary compute overhead and malpractice RVUs by applying historical practice cost percentages to a base allowed charge for each service. Essentially, the base allowed charge is the estimated 1991 national average allowed charge for a service. Historical charge data for 1989 will be adjusted to approximate 1991 charges, taking into account changes in payment rules between 1989 and 1991 and the most current definitions of units of service, such as the global surgical package definitions, restructured visit codes, etc.

The historical practice cost percentages will be computed as follows. First, the average percentage division of resources among the work, overhead, and malpractice components for each medical specialty (as defined by the Secretary) will be determined, using available national data. This type of data is compiled by the American Medical Association (AMA). HCFA has purchased the most recent data files available from the AMA. In addition, HCFA has in process a survey of physicians that will provide practice cost information by specialty. The PPRC is also conducting a survey to collect practice cost data. No final decision has been made as to the practice cost data that will be used to compute actual fee schedule RVUs. In computing the model fee schedule RVUs, practice cost data from a 1983 NORC (formerly the National Opinion Research Center, based in Chicago) survey were used. These 1983 NORC practice cost data are summarized in table 2.1.

Second, the proportion of each service (or class of services) performed by each specialty will be determined using recent part B claims data. As discussed under data options for fee schedule development, we expect to use 1989 BMAD data for this purpose in computing actual fee schedule values. The model fee schedule values shown in Addendum B were computed using 1987 BMAD data, updated to reflect 1988 payment rules.

Third, using this specialty-share information, an average overhead percentage and an average malpractice percentage will be computed for each service or class of services. (In the model fee schedule we have done these computations for individual services.) More precisely, the average overhead percentage for a service or class of services is defined as the sum for all specialties of the product of the average overhead percentage for each specialty times the proportion of that service performed by that specialty. The average malpractice percentage will be computed in the same way.

TABLE 2.1.—1983 PHYSICIANS' PRACTICE COSTS AS A PERCENTAGE OF GROSS REVENUE BY SPECIALTY

Specialty	Work (percent)	Overhead costs (percent)	Malpractice (percent)
Dermatology	54.2	43.8	2.0
Family Practice	51.6	44.5	3.9
General Surgery	52.2	38.0	9.8
Internal Medicine	52.9	43.6	3.5
Obstetrics & Gynecology	52.3	36.4	11.3
Ophthalmology	50.9	45.3	3.8
Orthopedic Surgery	42.1	49.0	8.9
Otolaryngology	49.3	43.5	7.2
Pathology	67.6	30.0	2.4
Radiology	57.4	38.3	4.3
Thoracic Surgery	57.0	32.3	10.7
Urology	50.5	43.5	6.0
Total	54.5	39.9	5.6

Note: Work percentage was calculated as 100% less the overhead costs and malpractice percentages. These are the practice cost percentages used for the model fee schedule. Data for additional specialities will be included in producing the actual fee schedule.

Source: 1983 NORC Physician Practice Cost Survey.

For example, consider the computation of a practice cost percentage for drainage of an eyelid abscess. Assume that this service is performed 20 percent of the time by family practitioners and 80 percent of the time by ophthalmologists. Further assume that on average family practitioners' overhead expenses are 44.5 percent of total revenues and ophthalmologists' overhead is 45.3 percent of total revenues. The average overhead percentage for this service would then be $(44.5\%)(.2)+(45.3\%)(.8)=45.1$ percent.

The final step in computing overhead and malpractice RVUs is to multiply the average overhead or malpractice percentage for a service by the base allowed charge for that service. For the service described in our example, the overhead percentage of 45.1 percent could be applied to a hypothetical $100 base allowed charge to yield an overhead RVU of 45.1. A parallel computation would yield a malpractice RVU on the same scale.

3. Combining Work, Overhead, and Malpractice RVUs onto a Common Scale

Once the separate work, practice expense and malpractice RVUs are computed for each service, they must be

combined in a manner to produce a single relative value for each service, as required by section 1848(c)(2)(A). As explained above, the work RVU is initially scaled in units selected by the Harvard RBRVS study whereas the overhead and malpractice RVUs are initially computed in dollar units. The requirement to combine these RVUs on a common scale requires either that the work RVUs be converted to dollar units or that the overhead and malpractice RVUs be converted to Harvard RVUs. The choice is arbitrary because ultimately the conversion factor is applied to either unit scale to provide the dollar payment amount. Once converted to a common scale, all three relative value units can simply be summed to provide a single RVU per service.

For this model fee schedule we have chosen to convert Harvard work RVUs to dollar units.[1] This was done by multiplying Harvard work RVUs by a conversion factor specific to the work component. This work conversion factor is computed by dividing allowed charges currently allocated for work (i.e., average work percentage applied to allowed charges across all services provided by all physicians) by the sum of all work RVUs for these services. Thus, the work conversion factor when multiplied by the Harvard work RVUs for any service yields a new work RVU value for the service expressed in dollars. This dollar-based work RVU value can be added to the overhead and malpractice RVUs for the service to produce a total RVU for that service. Further details regarding our methodology for combining all three RVUs onto a common scale are provided in Addendum A.

4. Updating the Relative Values

Section 1848(c)(2)(B) of the Act as added by OBRA of 1989 calls for a periodic review and updating of the relative value units for work, overhead, and malpractice. At least once every five years, the Secretary is required to adjust the relative values to take into account changes in medical practice, coding changes, new data on relative value components, or the addition of new procedures. However, the adjustments for any year may not cause the amount of expenditures for physicians' services under Medicare Part B to differ by more than $20 million from the amount that would have been made in the absence of RVU adjustments.

[1] No final decision has been made on dollar-based RVUs vs. Harvard scale RVUs for purposes of the actual fee schedule NPRM.

Once the tight timetable for implementing the fee schedule by January 1, 1992 has been met, the process for annual adjustments and updating of the relative values can begin. Modifications of the fee schedule will be made after consultation with professional medical organizations and PPRC. Various physician organizations have expressed an interest in participating in this process.

D. Geographic Practice Cost Indices

Section 1848(e) of the Act requires the Secretary of HHS to develop geographic adjustment factors (GAF) for existing payment localities to be used in computing the Medicare fee schedule. It requires an index to reflect the relative cost of practice expenses other than malpractice compared to the national average; an index to reflect the relative cost of malpractice compared to the national average; and an index to reflect one-quarter of the relative value of physicians' work compared to the national average. Components of such a geographic adjustment factor were already under development as a result of OBRA of 1986 which required the Secretary to develop an index to measure "justifiable" geographic differences in physicians' costs of providing services by December 31, 1989. As a result of this provision, alternative geographic practice cost indices (GPCI) were developed by the joint efforts of the Urban Institute and the Center for Health Economics Research (UI/CHER). The final report from UI/CHER on GPCIs was delivered to HCFA in June 1989.[2]

Indices were developed which measure the relative differences in the cost of a "market basket" of goods across areas by comparing the area cost to the national average. In this case, the "market basket" consists of the resource inputs required to operate a private medical practice. The inputs and their average weights across all specialties were obtained from the American Medical Association's *Socioeconomic Characteristics of Medical Practice* 1987. The input components and their weights are as follows:

Input component	Percentage of practice costs
Physician Work (Net Income)	54.2
Employee Wages	15.7
Office Rents	11 1
Medical Equipment, Supplies, and "Other" Expenses	13.4
Malpractice	5.6
	100.0

[2] *The Geographic Medicare Economic Index: Alternative Approaches:* W. Pete Welch, Stephen Zuckerman, Gregory Pope; June 1989, and September 1989 and March 1990 supplements.

Once the components and their weights were determined, a data source had to be found to measure the cost of each of the components in a given area compared to the national average. Because it would be prohibitively expensive to collect the detailed locality level data needed, data sources were limited to readily available already existing sources. Proxies were selected for each component as follows:

- *Physician work*—The average hourly earnings of workers, based on a 20 percent sample of 1980 census data, in professional specialty occupations (teachers, engineers, etc.) with 5 or more years of college. Adjustments were made for occupational mix in each area. The actual reported earnings of physicians were not used to adjust geographical differences in fees because these fees are, in large part, the determinants of the earnings, i.e., using physician earnings would be "circular."
- *Employee wages*—Wages of clerical workers, registered nurses, licensed practical nurses, and health technicians, also based on a 20 percent sample of 1980 census data.
- *Rents*—Apartment rental data produced annually by the U.S. Department of Housing and Urban Development were used because there were insufficient data on commercial rents.
- *Malpractice*—Rates, by State, for a "claims made" policy (i.e., a policy that covers malpractice claims during the covered period) providing $100,000/$300,000 of coverage were used. In States with differential rates among areas, the weighted average for the State was used. Data were collected on premiums for general practitioners who do not do surgery (low-risk), general surgeons (moderate risk), and orthopedic surgeons (high-risk). A "Medicare-weighted" risk group premium was then created according to the share of Medicare spending accounted for by each risk class.
- *Medical equipment, supplies, and "other" expenses*—UI/CHER determined that this component is represented by a national market and costs do not vary appreciably among areas. This component's index is 1 for

all areas to indicate no variation from the national average.

The areas selected for measurement purposes were the Metropolitan Statistical Area (MSA). Non-MSA areas within a State were aggregated into one rural area. MSAs satisfied the criteria of (1) homogeneity in input prices within the area, and (2) size large enough so that market areas are self-contained to minimize border crossing; i.e., physicians would not move their offices a few miles to secure higher payment and patients would tend to receive services within their area. Section 1848 (e) and (j) require, however, that geographic adjustments be made according to existing Medicare payment localities (see "Locality" section in Chapter III). Where localities crossed MSA boundaries, MSA indices were coverted to Medicare locality indices by population weight.

As mentioned earlier, for fee schedule computation, section 1848(e) requires a GPCI which reflects three separate components as follows: work, overhead exclusive of malpractice, and malpractice. Using the indices for Birmingham, Alabama as developed by UI/CHER, the components as required by section 1848(e) would be computed as follows:

	Indices				
Locality	Work	Wages	Rents	Other practice expenses	Malpractice
Birmingham, AL	0.924	0.947	0.761	1.000	0.826

• *Work*—As specified in section 1848(e)(1)(A)(iii) of the Act, added by OBRA of 1989, the work index value reflects one-fourth of the difference between the relative value of physicians' work effort in a particular locality and the national average. (The index is constructed such that a value of 1 represents the national average.)

$$\text{Work} = 1 - [1.924)(.25)] = (.75)(1) + (.25)(.924) = .981$$

• *Overhead exclusive of malpractice*—This would mean combining the values of wages, rents, and other expenses (including medical equipment and supplies) and dividing by their total national weight.

$$\text{Overhead} = \frac{(.157)(.947) + (.111)(.761) + (.134)(1)}{.157 + .111 + .134} = .913$$

• *Malpractice*—This would simply be the malpractice index.

The GPCI components for purposes of determining payments under the fee schedule for Birmingham, AL would look like this:

Locality	Work	Overhead	Malpractice
Birmingham, AL	0.981	0.913	0.826

A preliminary list of the GPCIs for all current Medicare localities in the form required by section 1848(e) of the Act can be found at Addendum C. GPCIs for malpractice are presently being evaluated for further refinement. Some changes may be made in the malpractice index if more recent data and additional information on State malpractice insurance requirements are available. Changes in the work and overhead indices are not likely to be made until 1990 census data become available. The PPRC is required to report to Congress by July 1, 1991 on the appropriateness of existing geographic localities and on a number of GPCI issues, including the extent to which existing GPCI indices accurately reflect practice costs and malpractice costs in rural areas.

As explained earlier in this chapter, the national level RVUs for each component—work, overhead, malpractice—will be multiplied by the respective locality level GPCI and summed to arrive at a total GPCI adjusted relative value. This total will then be multiplied by the national conversion factor to arrive at a fee schedule amount for each service within each locality.

In summary, for the GAF to be used in the Medicare fee schedule, HCFA will use the work performed by UI/CHER. The GAF defined by section 1848(e) uses separate geographic indices for work, practice costs, and malpractice costs. The geographic work index and the geographic malpractice index are derived by measuring the variation of costs in fee schedule areas from the national average for these factors based on the data described above. The practice cost index is derived by weighting and combining the fee schedule area variations from the national average for employee wages, office rent and equipment, and "other" expenses. The GAF for a procedure in a locality is constructed by multiplying these component GPCIs for work, practice costs, and malpractice costs by the percent of the relative value for the procedure allocated to work, practice costs, and malpractice costs, respectively.

E. Conversion Factor

Initial Computation

The conversion factor is a multiplier which transforms relative values into payment amounts. The conversion factor is a single national number which applies to all services paid under the fee schedule. Section 1848(d)(1)(B) of the Act, as added by OBRA of 1989, specifies that the conversion factor for the first year of the fee schedule must be budget natural, i.e., the conversion factor must produce total payments under the fee schedule that are the same as total payments that would have occurred had the current payment rules (generally based on the reasonable, customary, and prevailing methodology) continued.

We will compute the initial conversion factor by dividing the total actuarially estimated 1991 payments for physician services under the current payment system by the total number of RVUs expected to be provided in 1991 (expected frequency per service multiplied times total RVUs per service,

summed across all services). This computation will need to take into account the effect of the GPCI adjustments in order to produce a budget neutral conversion factor. The GPCI adjustments will affect budget neutrality because different volumes of services are provided in each geographic area. As prescribed by the statute, this conversion factor, computed using predicted 1991 expenditures, will be updated by the 1992 annual update factor to establish the initial fee schedule conversion factor. Also, payments for some services established by this initial conversion may be adjusted during the 1992–1995 fee schedule transition period. This issue is described in detail below.

The one possible exception to the general principle that all payments are to be based on a single national conversion factor may be anesthesia services as discussed earlier in this chapter in the section on Physician Work RVUs [on page 21.]. It may be necessary for these services to have a separate conversion factor if we retain the use of time in determining payment.

Subsequent Conversion Factor Computation Accounting for Transition Payment Limit

The following summary describes the transition rules as prescribed in OBRA of 1989 *before* any adjustment is made to restore budget neutrality for 1992 (required in OBRA of 1989 in section 1848(d)(2)(E)).

Summary of Transition Provisions. Under the transition rules, the fee schedule will be phased in from 1992 to 1996. The phase-in begins with the computation of an adjusted historical payment amount for each service in each area. This is defined as the weighted average prevailing charge in the area in 1991 with consideration of customary charges below the prevailing and other payment limitations. (For radiology services subject to the radiologist fee schedule, 1991 fee schedule amounts will be substituted for prevailing charges). This historical payment amount is in effect an average allowed charge across all physicians in all specialties performing a given service in a locality and will reflect any legislative changes which affect 1991 payments. The transition rules for 1992–1995 involve comparing this historical payment amount with the new fee schedule amount. It is important to remember that the effect of these rules on payments to individual physicians will depend on their own historical charging patterns. These transition rules take into account only the *average* allowed charge for a service in the locality, not an *individual* physician's charges under the old payment system.

If the historical payment amount for a service in a locality is between 85 and 115 percent of the fee schedule amount, maximum payment to all physicians in that locality will be at the fee schedule amount in 1992. However, if the historical payment amount is below 85 percent of the fee schedule amount, the payment amount for the service will be the historical payment amount plus 15 percent of the fee schedule amount. On the other hand, if the historical payment amount is more than 115 percent of the fee schedule amount, the payment amount in 1992 will be the historical payment amount minus 15 percent of the fee schedule amount.

These rules do *not* limit increases or decreases in 1992 to 15 percent of the historical payment amount as the short title of section 1848(a)(2)(A) of the Act implies. Rather, for services subject to the transition provisions, increases and decreases will be limited by a fixed dollar amount (i.e., 15 percent of the new fee schedule payment). Thus, increases can be more than 15 percent of the historical payment amount while decreases will always be less than 15 percent. A service will receive a higher percentage increase the farther its historic payment basis is below the fee schedule amount or a lower percentage decrease the farther its historic payment basis is above the fee schedule amount.

During the years 1993 to 1995, payment amounts for services subject to the transition provisions in 1992 will be brought closer to the fee schedule amount through application of a blended formula as follows:

- In 1993, payment will equal 75 percent of the amount determined for 1992 increased by the update for 1993, plus 25 percent of the full fee schedule amount.
- In 1994, payment will equal 67 percent of the amount determined for 1993 increased by the update for 1994, plus 33 percent of the full fee schedule amount.
- In 1995, payment will equal 50 percent of the amount determined for 1994 increased by the update for 1994, plus 50 percent of the full fee schedule amount.

In 1996, payment for all services will be equal to the fee schedule amount.

Note that those nonphysician practitioners who receive payment computed as a percentage of a physician fee schedule amount (see [Services of Nonphysician Practitioners in Chapter II A.] will be affected by the transition rules if the physicians in their localities performing the same services are affected by the transition rules. In other words, if a nonphysician practitioner is to receive a percentage of what the physician would be paid for the service in that locality, then the nonphysicians' payment amount will be computed as a percentage of the physician's payment after any applicable transition rules had been applied.

Budget Neutrality and the Transition Rules

OBRA of 1989 does not specify how the application of these transition rules for 1992 is to be reconciled with the budget neutrality requirement for 1991. Through an iterative process, we can compute a conversion factor resulting in payment amounts for 1992 which are budget neutral with 1991 expenditures and which meet the transition requirements. However, we find that program savings are likely to be derived in years after 1992 when the prior year's payments are blended with the full fee schedule amount. This is a result of the implementation mechanism prescribed by the legislation. Preliminary analysis suggests that some savings will result relative to a budget neutral baseline; however, a definitive analysis of the impact is not possible until all of the relative values, global fee definitions, and other factors are established. It thus remains possible that the budget impact could be minimal.

We have not been able to find any alternative way of computing the conversion factor which preserves budget neutrality throughout the transition and which does not violate the statutory transition requirements. We would note that there is no statutory requirements for the fee schedule to be budget neutral for subsequent years and that this phenomenon of the transition is recognized by both the Congressional Budget Office (CBO) and PPRC. We would further note that any expected "savings" occurring in years after 1992 may not materialize because of possible responses to fee schedule implementation by physicians and/or beneficiaries. An adjustment to account for these responses is discussed in the next section and is limited to 1992 only.

Complexity of the Budget Neutrality Computation

As described previously, the statute requires the Secretary to determine an initial conversion factor that is budget neutral relative to what Medicare expenditures would otherwise be without the fee schedule. The initial conversion factor is critically important because it is the base from which all future updates will be made.

Budget neutrality requires data on: (1) Fees for each procedure in each area (adjusted by the GPCI), consistent with application of the transition provisions, and (2) estimates of the frequency with which each procedure is performed.

Implementation of the fee schedule will involve changes in several important aspects of Medicare payment. Not only will there be changes in Medicare fees, but there will also be simultaneous changes with respect to the uniform definition of services for surgical global fees and medical visits. (These services account for more than 70 percent of Medicare physician dollars). For example:

• The uniform definition of surgical global fees will specify which preoperative, intraoperative and post-operative procedures are included in the global fee and which can be billed separately. Currently, carriers have their own definitions. We expect that there will be many services that are now contained in global fees (or which are otherwise not now billed), that will be billed separately under the fee schedule.

• Some options being considered for changing the coding system for medical vistis (e.g., incorporation of time in code definitions) represent a major change from the current system. When visit coding is changed to a uniform system, projections will need to be made on what the distribution of frequencies of visits will be under the new coding system.

In addition, as discussed later, there will be simultaneous changes in payment conventions and billing rules for a number of items such as: multiple surgeries, cosurgeons, and bilateral surgery. Application of uniform payment policies presents two problems in projecting volumes. First, billings for these "modified" services have been inconsistently reported in the past. Second, the reduction in payment for surgeries may lead physicians to bill additional amounts for services provided but not now billed or may encourage some physicians to bill for additional services, e.g., to have reciprocal arrangements with other physicians to act as assistant at surgery for one another.

This is the most massive change in Medicare payment for physicians' services since the inception of the program. Not only will there be major redistributions of payments among specialties and geographic areas, but we will simultaneously be revising definitions of service and payment rules. The reduction in some physicians' Medicare income under all these changes could be substantial, as some practices could experience net reductions of 15–20 percent or more. Under these circumstances, the incentives for physicians to change billing practices to mitigate the reductions will be significantly stronger than has been the case in the past.

Overall, physicians could react to the combined effects of these changes in a number of ways that would affect Medicare outlays. They could:

• Bill legitimately under our new definitions of services and associated payment conventions for services for which they do not currently bill.

• Bill for a higher level of service for medical visits.

• Provide more services, particularly visits, concurrent care, consultations and tests.

• Clearly, in light of all these changes, and possible volume responses by physicians and beneficiaries, the budget neutrality calculation is exceedingly difficult and critical. If the conversion factor were set too high, the Supplementary Medical Insurance Trust Fund outlays would be larger than anticipated, increasing the overall Federal budget deficit. In addition, the part B premium would have to be increased sharply to replenish the depleted trust fund (assuming that legislation will be passed to continue the part B premium at 25 percent of program costs).

It will be difficult to separate the legitimate changes (e.g., those due to physician compliance with new uniform service definitions and associated payment rules) from changes due to physician behavior intended solely or primarily to recoup some Medicare revenue losses. In addition, changes in service pricing may produce changes in beneficiary demand for services.

While we expect many changes, with causes not always easy to ascertain, we must do our best to anticipate these changes and account for them in computing the conversion factor. In the first year of the Prospective Payment System for hospitals, the DRG case mix index increased by over 9 percent, and subsequent studies have determined that only a small part of this increase was due to an actual change in case mix. The majority of the increase was attributable to changes in medical records and coding practices.

Some might argue that the MVPS will "take care" of unpredictable changes in frequencies. However, there are several problems with this argument.

• Because the default payment update can only be reduced by up to 2 percent, the MVPS will not adjust for projection errors resulting in over payment in excess of 2 percent.

• Moreover, because the default mechanism limits reductions in future updates, the MVPS has serious shortcomings in the event that projection errors are combined with inappropriate increases in volume. In this case, the impact of the floor on future reductions in the payment update could be substantial.

• Some may also object to the use of MVPS to correct for technical or computational errors. They would argue that the purpose of the MVPS is to encourage the involvement of physicians in the effort to slow the rate of growth in expenditures for physicians services, not make them subject to reductions resulting from correction of governmental errors in making budget-neutral conversion factor calculations.

• Finally, because of the two year lag between expenditures measured under the MVPS and payment updates, there could be permanent losses which could not be recouped under the default MVPS. For example, if, as a result of projection errors, payments were set too high by just 2 percent, permanent losses could exceed $1.6 billion for 1992 and 1993.

Given that computation of an accurate budget neutral conversion factor is critical, we plan to do several things:

(1) Do the best we can to predict frequencies under the standard definitions using the best available data. This will include reviewing the results of special surveys of carrier practices, and analyzing data collected by outside research organizations and PPRC.

(2) Make an adjustment to fees for 1992 to account for changes in the volume and mix of services as a result of the responses of physicians to implementation of the fee schedule.

Previous program experience with reductions in Medicare payments to physicians indicates that physicians change billing practices to partially offset losses resulting from fee reductions. HCFA and CBO have previously assumed that physicians make sufficient changes in their billing practices to offset about half of the savings that would otherwise be achieved by reductions in fees.

We are refining our thinking about applying such adjustments. In the past we have almost exclusively been in the position of predicting the effects of savings proposals, whereas now we need to predict physicians' responses to both increases and decreases in payments for various services. Thus, we believe that it would be appropriate to apply behavioral adjustments to the net change in provider practice Medicare revenue. This information would be

derived through analysis of the BMAD Provider File.

An issue in this regard is the extent to which physicians whose fees have increased will reduce volume in response to higher fees. We might expect them to be more willing to supply services as the Medicare fee increases. Alternatively, some of these physicians might cut back in their practice as Medicare fees increase, providing fewer services.

Another issue is whether physicians will raise their actual charges all the way up to the new Medicare fee schedule. (Medicare payments are the lesser of the actual charge or the fee schedule). We are continuing to study this issue further.

We note that CBO, in modeling the changes in physician fees, illustrates a behavioral response where "winning physicians" slow volume growth. Our own recommendation regarding behavioral effects to be reflected in the April NPRM is still under development. We will be analyzing a variety of alternatives regarding the behavior of winning and losing physicians for purposes of determining possible effects on the conversion factor. For purposes of this model fee schedule, however, *we have not assumed any behavioral offset in the illustrative estimates provided in Addendum A.*

In summary, there are a variety of factors that will affect the accuracy of our projection of the conversion factor for 1992. These include our estimates of the total number of relative value units that will be provided in FY 1991, the accuracy of our projections of the initial distribution of visit codes, legitimate physician response to new national billing rules for multiple surgery, bilateral surgery, assistants at surgery, etc., as well as the accuracy of our projection of the behavioral response of physicians to the price changes in the fee schedule itself. It will be difficult to accurately parse out which of these many possible causes led to any observed error in the initial conversion factor. The Department will carefully monitor changes in physician bills during the transition and will suggest to Congress specific adjustments if specific causes can be identified. However, it may also be necessary to seek general Congressional authority to adjust the conversion factor during the transition if projections prove to be inaccurate and the specific causes cannot be easily identified.

Future Updates of Conversion Factor

Beginning in 1991, section 1848(d)(2) of the Act, as added by OBRA of 1989, requires the Secretary to recommend to Congress by April 15 of each year an update to the fee schedule conversion factor for the following calendar year. In making the recommendation, the Secretary is required to consider the increase in the MEI (a measurement of inflation in the cost of running a private medical practice), the percent increase in aggregate expenditures for physicians' services in the first preceding fiscal year over the second preceding fiscal year compared to the performance standard rate of increase set for the first preceding fiscal year, access to services, changes in volume and intensity of services, and other factors he considers appropriate. (The performance standard rate of increase was described in Chapter I as a central feature of the MVPS.)

Congress may then choose to enact the Secretary's recommendation, enact some other update amount, or not act at all. If Congress does not act, the annual update is set according to a "default" mechanism in the law. Under this mechanism, the update for physicians' services is equal to the MEI adjusted by the amount the actual expenditures for the first fiscal year preceding the recommendations were greater or less than the performance standard rate of increase for that fiscal year. For example, given that the performance standard rate of increase for fiscal year 1990 is 9.1 percent, assume that actual expenditures for fiscal year 1990 increase by 10.1 percent over fiscal year 1989. If Congress did not set the update increase, then the default mechanism would take effect. Specifically, if the MEI for 1992 were 4 percent, the conversion factor update for 1992 would be 3 percent, because actual expenditures for fiscal year 1990 exceeded the performance standard by 1 percentage point. Conversely, if the actual expenditures for fiscal year 1990 increased by 8 percent over fiscal year 1989, the conversion factor update would be 5 percent (4+1) because actual expenditures were 1 percentage point less than the performance standard. The law limits the downward adjustment to 2 percentage points for 1992 or 1993; 2.5 percentage points for 1994 or 1995; and 3 percentage points thereafter. There is no limit on the upward adjustment.

F. Data Options for Fee Schedule Development

Data Source Options

As described earlier, national level claims data will be needed to: (1) Compute RVUs for overhead and malpractice expenses, and (2) compute the conversion factor, with adjustments for 1992–1995 transition rules. Because of the large number of services included in the fee schedule, we do not believe it is operationally feasible to make a separate data request to the carriers for needed data such as was previously done for computing conversion factors for the radiologist fee schedule. Because of the significant level of resources required to collect, process and validate carrier data, we will rely upon data routinely collected by HCFA when feasible rather than request supplemental data from the carriers.

Two possible sources of national data containing procedure level data currently collected by HCFA were considered for completing these fee schedule development tasks: (1) Common working file (CWF) and (2) BMAD procedure, provider, and beneficiary files. Both the CWF and BMAD are routine data systems that provide detailed procedure level data for non-HMO enrolled Medicare beneficiaries potentially useful for both computing national average charges and the conversion factor. BMAD data are submitted annually by the carriers whereas CWF data are reported by carriers through nine CWF host sites on a flow basis. However, because the CWF will not be fully implemented nationwide until 1991, we plan to use BMAD as the primary source of data for computing national average allowed charges.

BMAD data are currently available for 1988, and 1989 data are in the process of being compiled and edited. Each data file used for fee schedule development will be calibrated to the expected total expenditures for physicians' services for 1991, and will be adjusted for consistency with 1991 payment rules and for standardized payment policies (e.g., global fees, visit coding, local codes, coding changes). These files are described below.

BMAD Files

Procedure file: The Procedure file is an aggregate file representing 100 percent of Part B claims. Because it provides frequency of services and allowed charges by specialty and procedure code, we expect to use it to compute relative values for malpractice and other practice costs.

Beneficiary file: The Beneficiary file provides detailed claims data for a 5 percent sample of beneficiaries. Although frequencies for many procedures and localities are too low for computing overhead and malpractice RVUs for low value codes, we expect to use these data to estimate the impact of

standardizing payment policies (e.g., global fees).

Provider file: The Provider file provides detailed claims data for a 5 percent sample of physicians' and suppliers' profiling IDs. The Provider file will be used to compute an adjustment to the conversion factor to account for expected behavioral offsets for physicians that lose aggregate revenues under the fee schedule.

Prevailing Charge (Pricing) File: The Pricing file (1990) is being used in the process of updating the other BMAD files to 1990 (and eventually 1991) payment rules, reflecting changes such as annual updates, overpriced procedure reductions, and the designated specialty provision.

Common Working File (CWF)

The CWF represents a major innovation in the way that Medicare claims are processed. CWF is a decentralized benefit authorization process in which nine host sites review all claims and authorize payment by the carriers and intermediaries. At the point of payment authorization, all claims data are transmitted to HCFA for use in program evaluation and program development. Effective January 1, 1991, CWF will be implemented nationwide. The national implementation will provide very current and detailed claims data that can be used to measure the change in the mix of services resulting from the changes in payment policies and to evaluate the potential impact of physician payment reform, including policy standardization. In the meantime, selective use of available CWF data may help us in some instances to resolve discrepancies identified through the BMAD validation process described below.

BMAD Validation

BMAD data are being validated by comparison with 100 percent claims data from selected carriers. In brief, we are comparing BMAD descriptive data with results from the carrier 100 percent files. We are then computing total allowed charges and RVUs for a sample of procedures to compare estimated conversion factors based on these two data sources. Results from this preliminary validation process will be used to determine whether we will base all calculations on BMAD or whether supplementary data will be obtained directly from the carriers.

One concern with using BMAD data is that, although we are required to compute a conversion factor that will provide budget neutral outlays for 1991, the most current BMAD data we expect to have available for completing this task will likely be for 1989. While we can update these 1989 data to reflect 1991 payment rules, we would not be able to use BMAD to account for any changes in the mix of services provided between 1989 and 1991. This would not significantly affect our estimates of average charges per service, but it could affect the computation of the budget neutral conversion factor.

For example, a conversion factor computed using the 1989 service mix could be too high if services with relatively low relative values (e.g., visits or EKG interpretations) increase more rapidly than services with relatively high relative values (e.g., major surgical procedures) during this time period.

Therefore, CWF claims data for services provided during the fourth calendar quarter of 1990 and the first months of 1991 will be used to measure the changes in the mix of services provided between 1989 and 1991. If analyses of recent data indicate that there is likely to be a significant service mix change between 1989 and 1991, we will make adjustments to the 1989 BMAD as appropriate.

We plan to evaluate CWF data further during the BMAD validation process. We will use CWF data provided during 1990 for selected carriers to evaluate service mix changes and will continue this evaluation on a national basis as CWF data are received in 1991.

Chapter III.—Definitions Necessary for Fee Schedule Implementation

A. Defining a Unit of Service

1. Background on CPT–4 Coding System and HCPCS

Section 1848(c)(4) of the Act (added by section 6102(a) of OBRA of 1989) requires that the Secretary establish a uniform procedure coding system for the coding of all physician services, including an appropriate coding structure for visits and consultations. That section also provides that the Secretary may incorporate the use of time in the coding for visits and consultations only for services furnished on or after January 1, 1993. As part of the process of establishing a uniform coding system, the Secretary is required to consult with the PPRC and "other organizations representing physicians".

Section 6201(e)(4) of OBRA of 1989 requires that the Secretary conduct a study of the desirability of including time as a factor in establishing visit codes and report to Congress by not later than July 1, 1991. The report must include the desirability of modifying the number of visits codes, whether use of time would result in greater uniformity than modification of clinical descriptors and the ability to audit physician time accurately.

Since 1983, HCFA has required that physicians and carriers use the HCPCS to code and bill for physicians' services. The HCPCS has three levels:

Level 1—The American Medical Association's (AMA) *Physician's Current Procedural Terminology Edition 4* (CPT–4);

Level 2—The alpha-numeric HCPCS codes [3]; and

Level 3—Carrier-unique local codes.

HCFA has an agreement with the AMA to use CPT–4 for coding of physician services. Under that agreement, HCFA is represented by one voting member on the CPT Editorial Panel, the organization that is responsible for establishing the codes and their definitions. Although HCFA uses CPT–4 for coding purposes, HCFA establishes the Medicare payment rules with respect to these codes. Services that are not specifically coded in CPT–4 (e.g. chiropractor services) are coded in the alpha-numeric codes of level 2 HCPCS that is established and maintained by HCFA. Services which are not included in either level 1 or level 2 of HCPCS may be coded by carriers using carrier-unique local codes.

Similarly, there are three levels of modifiers for codes. CPT–4 has modifiers as part of that coding system. HCFA also has additional national HCPCS modifiers that are used for payment, billing and medical review purposes. Lastly, carriers are permitted to use carrier-unique modifiers for payment and administrative purposes.

There are several major issues pertaining to the use of these codes to generate payment for physician services under the Medicare fee schedule. Three of these issues pertain to defining a unit of service and are discussed in this chapter:

- How to define visits so that visit codes are used reliably and consistently by all physicians and all carriers;
- The scope of the global surgical fee: what services are to be included in the global surgical fee for a specific procedural code, since the services to be included will determine the RVUs to be associated with the code; and
- When and to what extent to permit use of local codes in a national payment system.

A fourth major issue of when and to what extent to permit payment differentials based on the presence of modifiers to coding for physician

[3] HCPCS codes are used primarily for nonphysician services such as durable medical equipment.

services is discussed in chapter IV on payment adjustments:

2. Coding of Medical Visit Services

The various OBRA of 1989 provisions described above relating to coding of physician visits reflect a widespread concern that the current visit coding structure in CPT–4 is open to varying interpretation as it is used by physicians and carriers and that this variation must be reduced in order to make payment for visits under the fee schedule rational and equitable. Results of a review of 1987 BMAD data by HCFA staff and by the Office of the Inspector General support the view that there is significant variation in the use of CPT–4 codes for physician visits. For example, one carrier showed 86 percent of its total billings for office visits for established patients under code 90060 while another carrier showed only 9 percent of its billings for this same code. Code 90060 is for an "intermediate" level of service. It is third from the top in an array of 6 levels of visits of increasing complexity.

The most common explanation offered for this difference is that the current CPT–4 definitions for these services are not clearly differentiated from one another. A number of approaches to providing more clearly differentiated service definitions are under consideration, including reducing the number of visit codes and the possible incorporation of service time as a factor in defining codes. We expect final resolution of these issues to involve extensive coordination and collaboration by the Department with a number of organizations, including the PPRC, the CPT–4 editorial panel, and organizations representing physicians. PPRC and the AMA are conducting their own study of visit coding issues. They plan to propose changes in visit coding that could be incorporated in the 1992 CPT–4.

We fully expect that cooperation with the AMA CPT–4 editorial panel in this process will result in development of visit codes that will be acceptable for use in the fee schedule. However, if no consensus is developed, we could establish non-CPT–4 HCPCS codes for visits based on the requirement for the Secretary to establish a uniform coding system for all services.

At this time, we are presenting in this model fee schedule a summary of the issues to be addressed and our preferred approaches based on our analysis of the issues to date. As we continue to consult and to prepare the congressionally mandated report on visit coding, the views presented here will be reexamined and refined.

Current Use of CPT Visit Codes

Under the current system, Medicare spends about 410 billion or about 35 percent of total physician dollars on medical visits and consultations. This figure is likely to increase as the fee schedule is phased in, since the Harvard study results have shown cognitive services generally to have been undervalued under the customary, prevailing, and reasonable charge payment methodology. BMAD data also show that about 13 percent of physician dollars pay for office visits, while another 10 percent are for hospital visits. Smaller sums are spent for specialized visits (5 percent of physician dollars), consultations (4 percent), and nursing home and home patient visits (1 percent).

CPT–4 currently distinguishes among visit services for six sites of service: office, home, inpatient hospital, emergency department, skilled nursing facility, and other nursing and domiciliary care facility. CPT–4 also differentiates new vs. established patients for several sites; in the other sites, a distinction is made between initial and subsequent visits. Depending on the site of service and new/established or initial/subsequent categories, CPT–4 contains three to six levels of service for visits. In addition, CPT–4 contains specialized visit codes for several categories of services, including psychiatric, dialysis, ophthalmologic, and critical care visits. Visits are defined separately from consultations.

A number of features of the CPT–4 visit codes and their use have been cited as causes of the wide variation in the way these codes are used in practice. Separation of the detailed descriptions from the listing of visit codes in the published CPT–4 book is believed to discourage some physicians from reading them at all. In addition, many believe that current narrative descriptions of the codes do not clearly delineate differences among levels of service. Further, because the terminolgy for levels of service (e.g., limited or intermediate) is not neutral, it may encourage physicians to upcode based on their perceptions of relative payment amounts.

Another difficulty with the use of the current CPT–4 visit codes is that when the transition to CPT–4 required carriers to map their prior coding system to the new codes, some carriers had fewer levels of service than CPT–4 (e.g., 3 levels vs. 5 or 6) and therefore crosswalked according to other criteria (e.g., payment levels). In addition, there has not been any comprehensive effort by HCFA to require carriers to tell physicians how to use the different levels of codes properly. Physicians often use only three or fewer levels of service to report their visits (although no three levels are used consistently); some use "superbills" that do not even list the full range of levels of service. Thus, while a 5 or 6 level coding structure for a given visit service may be in place in CPT–4, in practice not all the levels may be in use and the levels are subject to varying interpretation.

Basic Changes to Improve Uniform Coding

We believe that at a minimum several basic changes would improve the coding system for visits. We plan to work with the carriers and the CPT–4 Editorial Panel to make these changes by the time the physician payment fee schedule begins to take effect in January 1992. None would require a legislative change. These improvements include:

- Improving the content of service descriptors, i.e., the narrative terminology associated with each code;
- Including speciality-specific examples for each level of service;
- Developing explicit documentation requirements for the physician's medical record to support the choice of visit code;
- Integrating in a single place in CPT the detailed content descriptors with the code for each level of service;
- Replacing the adjectives that accompany each level of service (e.g., "limited" or "intermediate") with a more neutral set of labels such as Level I, II, etc.;
- Improving carrier administration and enforcement of coding rules, including education of physicians on how to use codes appropriately for billing and reporting purposes.

Major Visit Coding Policy Issues

While implementation of the relatively straightforward changes listed above will improve the uniformity of visit coding, many believe that additional changes will be required. Two issues dominate these discussions: (1) whether to incorporate time in the visit code definitions and how, and (2) how many levels of service should be used. Incorporation of time is the more controversial of the two and contains a number of important subissues that will be explored below.

- *Should time be incorporated in the code definitions?* Incorporation of time is a major change in the coding system. No one knows with any precision or certainty how practicing physicians

would react to and use a visit coding system that incorporated time.

There are four principal arguments in favor of using time as a factor.

1. Some believe that it would improve the consistency of the use of codes because time makes differences between levels more clear.

2. Use of time would increase our ability to estimate the frequency distribution of visits under a new coding system, which is important for computing a budget neutral conversion factor and for documenting upcoding if the distribution of visits changes. However, at this point we have data only for office visit duration (from the National Ambulatory Medical Care Survey or NAMCS). A possible source of hospital visit time data is a PPRC survey though it is limited to three specialists. We have not yet identified a source of time data for other sites.

3. If 45 and 60 minutes represented the highest levels in a 5 level system, some believe that physicians would be more reluctant to code higher levels than under the present system, where times are not specified.

4. Use of time would provide a better basis for identifying physicians with aberrant practice patterns and a better basis for auditing physician bills against medical records. (This argument is stronger if actual time is used rather than typical time, another subissue discussed below.)

There have not been any other proposals for revising content of general medical visits that distinguish between levels of service as clearly as those that use time. However, emergency physicians have recently submitted a proposal for emergency department visits that merits consideration.

Possible drawbacks to the use of time as a factor in visit coding include:

1. It is possible that, no matter how time was characterized officially in the published guidelines, it could quickly become for all practical purposes the single factor used to distinguish among medical visits. This could lead to either of two unfortunate scenarios. First, if typical time were used to distinguish among levels of visit service without sufficient emphasis on service content as the primary factor, some observers fear widespread upcoding. Specifically, physicians could use higher codes than were actually appropriate on the grounds that they were more efficient than the average physician (e.g., a visit that takes a particular physician 15 minutes might be *reported* as a 30-minute visit because he mistakenly believed, that it typically took his colleagues longer to perform the same service). Second, if actual time were used to distinguish among levels of visit service, this system could reward some physicians who simply took longer than necessary to perform a service either because they were inefficient or because they had slack time in their practices or both.

2. No research has been conducted to demonstrate that use of time as a part of code definitions would improve consistency in the use of codes. Nor has there been large-scale experience with the use of time-based visit codes either in other public programs or in the private sector from which to draw conclusions.

3. Some fear that use of typical time could make use of codes even less consistent than under the present system, since each physician would make individual and subjective judgments as to what was the typical time for a particular service.

4. The opportunity to use time-based visit reporting for audit purposes (comparing bills against records) may be severely limited by the scarcity of resources for this purpose.

5. Visit frequency distributions predicted using NAMCS data may be inaccurate because we do not know how differently physicians may code services when payment depends on coding decisions. (NAMCS was a survey for research, not payment purposes.)

• *Should time be secondary, equal, or dominant in relation to content of services as a factor in visit coding?* One of the major issues in the use of time is its relationship to content descriptors. As mentioned earlier, many believe that if time were to be introduced, it would be very difficult to keep its status equal to (or subordinate to) content. Thus, time in practice could become the primary criterion for coding visits, even if it were nominally a secondary criterion intended to supplement content descriptors. The likelihood of time actually being used as a coequal or secondary criterion would be improved if explicit decision rules were developed and examples provided to illustrate how coding decisions should be made when time and content seem to lead to different coding outcomes. Examples of such cases follow.

Case 1. A complete physical exam with several tests takes only 15 minutes. Using time as the basis for coding, this might be a level II visit, but using content criteria might change the designation to a level IV visit.

Case 2. Two sutures are removed during a 60 minute visit. Using time this might be defined as a level V visit, but based on content it might be a level II visit.

• *Should time be applied only to office visits or to all visits?* There are two serious difficulties involved in extending the introduction of time in visit coding beyond office visits to visits in other settings. the first relates to the availability of data. Without data on the average visit time outside the office setting (as NAMCS provides for office visits), the crosswalk from the old to new systems would have to rely on the current mean distribution for these visits to estimate the frequency distributions for the new codes. This estimating process could be extremely inaccurate and could compromise the accuracy of the budget neutral conversion factor.

The second problem with respect to time and hospital visit coding is that patient encounter time may be a poor proxy for physician work in the hospital setting because a large component of a hospital visit is time spent reviewing charts, talking to nurses, scheduling procedures, etc. No more appropriate measure of time in the hospital setting has yet been developed.

• *For office visits, should encounter time or total time be used?* The Harvard research team has indicated that it can provide physician work RVUs for visit services based either on patient encounter time or total time (presumably including time for review of chart, consultation with other staff, post-encounter completion of chart, ordering of procedures, etc.). However, we have no data to guide us in estimating likely frequency of services using total time-based visit codes for purposes of computing the conversion factor. In addition, we expect that physicians would find it difficult to estimate total time. Patient encounter time can be more accurately measured and is more meaningful to the patient than any other measure of time. The NAMCS data described earlier could be used for predicting frequencies of code use based on encounter time. In addition, the Harvard work has shown that patient encounter time is a good proxy for physician work with respect to office visits. Phase III of the Harvard study will create a crosswalk between current and proposed codes.

Another logical possibility is scheduled time, but scheduled time in practice may be irrelevant to the amount of time actually spent for a visit and the amount of work the physician puts into the visit. (A standard 15-minute appointment may relate to a task that can be completed in 5 minutes or a problem that may take 45 minutes to resolve.)

• *Should typical (or average) time be used or actual time?* Using actual time

would provide a more precise and specific definition of the level of service in that it would avoid ambiguities about what "typical" and "average" times could mean. Using actual time would provide good historical trend data on which profies could be built for future analysis. However, use of actual time would also mean that a single minute could make the difference between payment amounts and would encourage coding to the higher code for bordering visits. Actual time would imply that we expect physicians to keep records of exact durations of visits when, in fact, many physicians will probably estimate time in any event. In some instances it could be difficult for physicians and patients to establish when the visit started and stopped and what activities should be included in computing the actual length of the visit. Actual time could also result in different payment for the same services depending upon the individual physician's efficiency in providing the service (a problem already noted with respect to use of time in visit coding generally, which is most pronounced when actual rather than average time is used).

Typical time (the typical or average time that physicians generally take for that type of visit) seems more compatible with how physicians are likely to keep records on duration of visits (e.g., estimated times or times based on a schedule book). Typical times would be more consistent with available data for estimation of frequency distributions for office visits for conversion factor computation. (For example, NAMCS data, which attempt to measure actual face to face time, cluster around 5 minute intervals.) Use of typical times would potentially afford some latitude in accommodating variation in physician practice patterns regarding the use of nonphysician practitioners to provide care (e.g., the nurse who checks vital signs during a physician visit for blood pressure management.)

The second major visit coding policy issue related to the number of levels of service and how those levels would be defined if time were used as a factor.

• *How many levels of service should be used?* OIG, in its report to Congress on variation in visiting coding, recommended reducing the number of codes as a way of minimizing the variation in coding for visits. In our October 1989 report to Congress ("Implementation of a Medicare Fee Schedule"), HCFA and the Department also indicated general support for this approach. Most of the discussion of how many levels of service to establish has centered on a 3 level system versus a 5 level system, although a 4 level approach could also be considered. The number of levels presently in CPT–4 ranges from 3 levels for initial hospital and SNF visits to 6 levels for office visits for established patients and all emergency room visits.

Analysis of BMAD data shows that most physicians use only 3 codes (although there is no consistency in which 3), and therefore physician coding might arguably be contained in *3 levels of visits.* The middle code could be established as the routine visit (e.g., covering 75 percent of all visits). Supporters of this approach believe that fewer levels of service would lead to more consistency in coding and less opportunity for upcoding, since physicians would have a narrow range of alternatives from which to choose when reporting their services. Three levels of visits would likely result in significant increases in the payment amounts from one code to the next higher code; where upcoding occurred, it would be very expensive to the program. The middle (or routine) code would likely result in payments too high for some services and too low for others because of the large variation in services potentially provided within each code. These variations, however, might average out because physicians presumably see a wide range of patients. Outlier cases could be handled "by report" (on a case-by-case basis, outside the three established categories).

A *5 level code system* would provide additional levels to account for services by specialties that typically have a higher percentage of more complex and lengthy visits (e.g., geriatricians, rheumatologists, neurologists). Payment amounts would escalate more gradually from level to level; where upcoding occurred, the payment impact would be less severe than under a 3 code system. A 5 level system would also provide for a separate code that could be used for the least intense services that are increasingly done in physician's offices by nonphysician practitioners; under a 3 level system, much more could be paid for this kind of service.

• *What time intervals should be used with the different levels of service?* The following were taken into account as we considered this issue:

—Data from the 1985 NAMCS survey for office visits indicate that time estimates generally cluster around 5-minute intervals, leading us to select timeframes consistent with these periods.

—About two thirds of the office visits would be included in the lowest codes under any of the options we considered.

—About 20 percent of the office visits took about 10 minutes; we assume that physicians would likely code these in the second level of a 5 code system, rather than coding them as the lowest category of visit.

—The percentage distribution of visits for the HCFA 5 code typical time system (less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes) is virtually identical to our estimation of the effect of the PPRC's proposed typical times.

Legislative Issues Surrounding Visit Coding

There are two significant issues relating to visit coding that will require statutory amendment. The Administration intends to submit to Congress legislative proposals as described below. These issues are as follows:

• *Should time be used in visit coding prior to 1993?* If there is agreement on incorporation of time into the definition of levels of service for visit coding, we may want to request a legislative amendment in order to implement the change simultaneous with the implementation of the Medicare fee schedule in 1992. This would avoid the need for a major change in the fee schedule in the middle of the transition period. (Office visits represent about 13 percent of charges for physician services.)

• *How should we correct for errors in projecting the distribution of visits in computing the initial conversion factor?* Since we will have no actual history of volume or frequency distribution of physician services under the new visit codes, our estimated frequency distribution may be inaccurate. Any inaccuracy will cause the budget neutral conversion factor to be too high or too low, resulting in either overpayment or underpayment relative to the amount we would otherwise have paid for physician services. For example, a 5 percent error applied to a base of $10 billion for visits could result in an error of $500 million.

As described in Chapter II, we are prohibited from making any adjustments to relative values in the fee schedule which in one year would result in a net change of more than $20 million in part B expenditures for physician services. Thus, we would need new statutory authority to recalculate the conversion factor following implementation of the new visit codes if it became apparent

that the actual frequency distributions under the new visit codes differed significantly from the estimates we used for calculating the conversion factor.

As discussed earlier in Chapter II, the MVPS is designed to control the growth in expenditures for physician services by adjusting the annual update of the conversion factor. However, use of the MVPS update process to make adjustments resulting from miscalculation of visit code frequencies would not be a preferred approach, since we believe the primary focus of the MVPS should be on controlling volume, not as a tool for making technical adjustments.

Preferred Approach

• *Incorporate time for office visits.* The content descriptors of the new coding system should incorporate, at a minimum, the nature and complexity of the patient's problems and the sepcific services provided. On the surface, incorporation of time into coding of office visits would be likely to enhance the reliability and consistency of visit codes. For example, time could be used in the code development process to establish consistency among the patient's problem definition, services provided, and coding examples. Harvard has demonstrated that time has a high correlation with physician work during an office visit and it is a relatively straightforward concept to incorporate into visit coding for these services. However, any recommendation to include time in office visits should depend upon the results of a pilot test establishing that the accuracy and reliability of coding is improved. We are currently developing our plans to conduct such a test which would be initiated if time is adopted by the CPT–4 editorial panel later this year. Moreover, we do not believe that data currently exist to support extension of time to hospital and other nonoffice physician visits. Thus, we would support use of time as a factor in coding only of physician office visits at this time assuming a pilot test indicates this is appropriate.

At this time, we are uncertain whether the incorporation of time is appropriate for coding hospital visit and other visits made outside of an office setting. Hospital visits in particular differ from office visits because the content and focus of the physician's effort are different. Therefore we are uncertain whether the levels of service and times that are appropriate for office visits would also be appropriate for other visits. Moreover, unlike office encounter time, we have no data with which to predict the frequency distributions of codes for non-office visits that incorporate time. We are, however, continuing to investigate sources of time data for these other visits and we are working on improvement in the coding for them. If time is to be included for office visits, we would anticipate using it as follows:

• *Use time to supplement content descriptors.* Visits should be coded on the basis of services performed (i.e., content), with the inclusion of time as a descriptive factor to provide benchmark standards. Time should be viewed as a supplement, secondary to content descriptors. We believe that basing coding on time alone would be inequitable to efficient physicians. Decision rules and examples should be provided to clarify how time is to be used in coding to minimize the possibility that in practice it will become the primary or sole criterion in establishing level of service.

• *Use encounter time rather than total physician time.* We prefer that encounter time (face to face physician-patient time) be used as a factor in the level of service of physician office visits. It presents fewer operational problems than other measures of time and we have some existing data on which to base frequency estimates.

• *Use typical time rather than total physician time.* We favor use of typical time rather than the actual time of each visit as the measure of time for visit coding. Although actual time could enhance the precision of level of service coding, it could also impose an unreasonable recordkeeping and reporting burden on physicians. In addition, typical time is more consistent with our view that time should serve as an additional descriptor supplementary and secondary to other content descriptors. Moreover, the development of specialty examples for each level of care will assist physicians in determining the typical time for the services described by the code.

• *Establish 5 levels of service with typical times of less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes.* We support establishment of a 5 level of service system for coding of visits. Having 5 levels of service for visit codes leaves enough room for appropriate coding of services in specialties that have very long visits. It will also provide a smaller margin of increase from one level to the next level so that upcoding to the next level, when it occurs, will not result in large payment increases.

We believe that the following typical times could appropriately be used as factors in defining medical visits in a 5 level system: less than 10 minutes, 15 minutes, 30 minutes, 45 minutes, and more than 60 minutes. According to our analysis of NAMCS data, these typical times will result in a distribution that clusters most of the visits in the 3 lower codes, but provides for differential payments for the extremely long visits provided by some specialties.

• *Seek a legislative change to allow use of time before 1993.* We believe that it may be appropriate to request a statutory amendment to eliminate the prohibition on the use of time in visit coding before January 1, 1993. The CPT 4 Editorial Panel has been presented with the results of the PPRC/AMA process and will soon make a decision on the issue of time in coding of visits for inclusion in the 1992 CPT–4 book. If the CPT–4 Editorial Panel decides to incorporate time into some or all visit code definitions beginning January 1, 1992, we would like to be able to implement those codes on that date, simultaneously with the start of payment under the fee schedule. In this case, we would need a statutory amendment to eliminate the prohibition on using time in visit code definitions before January 1, 1993.

• *Seek legislative authority to rebase the conversion factor.* We plan to request legislative authority to recalculate the budget neutral conversion factor if the first full year's experience with the new visit codes reveals that the frequency of visits is significantly different (either up or down) from our original estimates used to calculate the conversion factor. This would be authority only for a one-time "rebasing" or technical adjustment related to visit coding reform—other adjustments would be made under the existing OBRA of 1989 authority.

Other Coding Issues

There are several other visit coding subissues that also need to be addressed, and for which we have not yet developed recommendations. The most important of these are summarized below.

• *Should there be new and established patient distinctions?* The additional "work" required for a new patient needs further analysis. It is not clear to what extent the services provided within a code level differ significantly between a new and an established patient. The NAMCS data on office visits show that visits by new patients take longer (approximately 5 minutes) than visits by established patients. The Harvard Phase I results suggested that the physician work per

time period is greater for new patients than for established patients.

• *Should there be separate codes by site of service?* After we have received the Harvard data and have analyzed differences in work site of service, we will determine to what extent payments should vary by visit site (e.g., office and hospital visits may require different code definitions, and overhead costs are likely to be different). Payment differentials for site of service could be maintained even without different codes for sites of service because a site of service indicator is coded on each claim. Reliance on the site of service indicators on the claim could result in an increase in the number of sites of service recognized for payment purposes. Currently there are only 6 sites of service in visit codes, but there are 10 site of service codes on the claims form. One argument against reliance on these site of service indicators is that it may be difficult to develop uniform visit code definitions that would apply in all sites (e.g., office visits versus hospital visits).

On the other hand, relying on site of service indicators on the claim may result in improvement in the site of service data so that it would be more useful for statistical and program analysis.

• *How should the "other" visit codes be handled (psychiatry, emergency room, ophthalmological, case management, critical care, etc.)?* The categories listed above have long had separate codes and a case can be made that visits in these categories differ from typical physician visits. Indeed, the specialties most commonly performing these "other" visits have generally argued in favor of additional specialized visit codes. However, section 1848(c)(5) of the Act prohibits any differential payment based on physician specialty. Harvard's Phase II study is expected to provide work RVUs for many of these services; these results may be helpful in evaluating the need for specialized visit codes under the fee schedule. In principle, we expect to recognize specialized visit codes under the fee schedule only if a unique service can be identified—a service whose content varies significantly from that of physician visits in general.

• *Should special patient characteristics be used?* The PPRC/AMA consensus panel is considering whether the presence of special patient characteristics such as communication barriers, cognitive impairments and/or chronic physical impairments should be recognized by an increase in the visit code level.

We are not aware of evidence that there is increased physician work in visits made by individuals with these characteristics or that these visits take physicians longer than would be spent with individuals without these characteristics. Moreover, the visit definitions are intended to represent the typical visit (i.e., an average of a range from shorter to longer visits). Thus, we would question the need for an automatic increase of one level even if there were evidence that patients with these special characteristics required more time or effort to provide the content included in a defined level of service.

In general, the Medicare physician fee schedule payments are being established based on averages. Thus, we expect some variation among patients but these differences should usually average out across physicians' caseloads. Thus, while we are not recommending that special patient characteristics be recognized for visit coding, a payment modifier for unusual circumstances which is discussed in Chapter IV might provide a mechanism for dealing with very unusual circumstances.

In addition, an automatic increase of one level for patients who have these special characteristics presents several other problems. The special characteristics are difficult to define without creating the opportunity for gaming to increase payment inappropriately unless they are defined by the results of formal evaluations. However, use of formal evaluations or assessments merely to justify a higher visit code level imposes a documentation burden on the physician and a potentially significant and unnecessary cost to the beneficiary.

• *Should nonphysician practitioners use the same codes as physicians when they provide services without any physician-patient encounter?* Visits made to allied health professionals (e.g., nurse practitioners, social workers, physician assistants, etc.) who are employed by a physician may be covered by Medicare as "incident to" the physician's service if the physician is on the premises when the service is provided, even when the beneficiary does not see the physician (see section 2050 of the *Medicare Part B Carriers Manual*). The law provides for inclusion of these services in the Medicare fee schedule. Also, there is a CPT–4 office visit code that specifically indicates that the physician need not provide the services.

These services have historically been billed using CPT–4 visit codes used by physicians. Using current BMAD data, it is not possible to identify those "physician" visits that were really visits to these allied health professionals employed by physicians.

However, we believe that the number of these visits is very limited and the current CTP–4 definition of visits only expressly recognizes these visits in the lowest level of service.

Although the times used in the definitions of visits will be physician-patient encounter time, the content of the visit is not limited to services that can only be performed by a physician. We expect that nonphysician practitioners who provide services "incident to" a physicians' service would continue to use these codes. Issues related to establishing payment amounts for nonphysician practitioners are addressed in Chapter IV.

• *Are separate codes for consultations necessary?* In the current CPT–4 definitions for consultations it is difficult to clearly distinguish between initial office visits and initial consultations since each involves evaluation of the patient and each may or may not invoke the initiation of treatment. Moreover, the content of a visit versus a consultation is identical in many cases.

The difference between consultations and visits appears to be whether the patient was referred by another physician and whether the physician has assumed responsibility for the continuing care of the patient. If the patient was referred by another physician and the consultant has not assumed responsibility for the continuing care of the patient, the encounter may be billed as a consultation regardless of whether treatment was provided at the request of the attending physician.

Since the content of a consultation is so finely distinguished from the content of a visit, the question is whether consultations should continue to be coded and valued separately from visits. Relatively complex consultations might receive higher payments without establishing separate code levels if any extra work for the consultation justified coding to a higher code level. We expect to analyze the relative values for physician work that will be provided by phase II of the Harvard study for visits and consultations before we recommend whether initial consultations should be coded and/or valued as initial visits.

3. Scope of the Global Surgical Package

Background and Current Carrier Procedures. As mentioned earlier, under the Medicare fee schedules based on the Harvard RBRVS study, national uniform relative values would be established for all physician services. A national

conversion factor would then be calculated. The GPCIs or GAF would then be incorporated to produce local Medicare fee schedules.

Since the fee schedule is based on national relative values, uniform definitions of services are required. Without such standardization, it would not be possible to compute budget neutral conversion factors with any degree of accuracy. Standardization is also necessary to produce equitable payment amounts. Standardization of surgical procedures is a special problem because of the concept of a global package for surgery. Surgical services make up about one-third of all billings for physicians' services and are expected to be about $9 billion in fiscal year 1990.

The surgery billing guidelines in the AMA's CPT–4 state that "Listed surgical procedures include the operation per se, local infiltration, metacarpal/digital block or topical anesthesia when used, and the normal, uncomplicated follow-up care." This concept is referred to as a "global package" for surgical procedures. Under this concept, surgeons bill a single fee for all their services usually associated with the surgery. This global fee includes all intra-operative services necessary for the surgery itself, and follow-up care such as hospital and office visits and services such as removal of sutures and casts. In some cases, preoperative visits may also be included.

Each of the Medicare carriers uses the concept of global fees for surgery. However, there are significant variations among carriers as to what periods constitute preoperative and post-operative care and what specific services are included in these periods. For example, in a recent carrier survey done by HCFA, 53 percent of carriers included preoperative care in the global surgical fee. The range of days in this preoperative period was from 2 to 5 days prior to surgery. While 100 percent of carriers include post-operative care in most global surgical fees, the number of days in post-operative care varies by procedure. The number of days included in post-operative care ranged from 0 to 270 days after surgery. Studies done by other groups such as the PPRC and the Center for Health Economics and Research (CHER) similarly demonstrate the lack of a national uniform global surgery policy among Medicare carriers.

Harvard Study Assumptions

As discussed in chapter I, the physician work RVUs in the fee schedule will be primarily based on phase II of the Harvard study. The surgical global services definition in the Harvard study is narrower than most carriers' definition today.

The surgical global services in the Harvard study included the hospital admission work-up and hospital visits before the operation; the primary operation; immediate post-operative care including dictating operative notes, talking with the family and other physicians, writing orders, and the evaluation of the patient in the recovery room; post-operative follow-up on the day of surgery, and post-operative hospital visits. The surgeon's initial evaluation or consultation, and pre- and post-operative office visits were excluded.

The global service for surgery in an ambulatory setting included the preoperative work-up; dressing, scrubbing, and waiting before the operation; the primary operation; and post-operative care on the day of surgery. Again, the surgeon's initial evaluation and consultation, and pre- and post-operative office visits were excluded.

The work RVUs for surgical services expected from Harvard will, therefore, often be narrower than the traditional concept of a glogal surgical package. These work values will have to be adjusted to reflect whatever national uniform global surgical definition is selected. For purposes of calculating the model fee schedule, we have increased the Harvard work values for major surgical procedures by 10 percent. We expect to refine this adjustment in the coming year prior to finalizing the 1992 Medicare fee schedule.

Preferred Definition

Implementation of the fee schedule will have significant redistributional effects among types of services and physician specialties. One set of simulations based on preliminary Harvard values and an overhead-only GPCI show that program payments for surgical services would in the aggregate be about 16 percent less under the fee schedule, while payments for visits and consultations would be 27 percent greater. Although these simulations did not have the final Harvard values and did not weight the components and the GPCI as was subsequently mandated by OBRA of 1989, it is felt that they represent a fair approximation of the directional effects of the fee schedule.

We believe that the lowered payments for surgical services under the RBRVS could provide an incentive for surgeons to "unbundle" heretofore global services and bill separately for some pre- and post-operative services. "Unbundling" is the process whereby physicians fragment a procedure, such as a total hysterectomy, into its component parts, billing separately as if each component were done as a separate surgical procedure. Unbundling can also occur when surgeons bill separately for visits related to the surgical procedure. This can result in charges that are much higher than if the total procedure was correctly described and billed. "Unbundling" is not a new concept, and all third party payors, private insurers as well as Medicare, are concerned about it. The increased value of visits and consultations could add to the incentive to "unbundle." This could provide a means for surgeons to offset payment reductions for surgery expected under the RVS based fee schedule.

For all these reasons—budget neutrality, payment equity, and safeguarding against unbundling—we are proposing the following uniform, national definition of global surgical services. This policy would apply in all settings. Although there is considerable existing variation among carriers and no national existing "norm," we believe that our proposal reflects what exists at many carriers and to a certain extent the way that physicians already bill.

- *Initial Evaluation and/or Consultation by Surgeon.* About 40 percent of carriers currently include in the global fee the initial evaluation or consultation by the surgeon to determine the need for surgery. However, they only do so if the consultation takes place within 3 to 7 days prior to the surgery. If the decision is made not to do the surgery, the surgeon is allowed to bill separately for the consultation in all cases.

We recommend that the initial evaluation/consultation be paid separately. It is a distinct, readily identifiable service that is furnished whether or not the surgery is performed. Furthermore, the value of the work for the evaluation/consultation is the same whether the surgery is performed or not. Since it is always billed when the surgery is not performed (and is probably billed in many cases where it is included in the global package because in the case of elective surgery many consultations probably take place more than 3 to 7 days before the surgery) we feel that it is preferable from both a policy and an operational standpoint to pay for the surgical evaluation/consultation separately.

The underlying concept of the fee schedule is to uniformly base payment on the resources involved in providing a service. Paying the initial evaluation or consultation by the surgeon separately in all cases will do this. A disadvantage

of allowing separate billing of the consultation is that it subjects the program to possible upcoding of the level of consultation billed (e.e., consultations are billed using three levels of codes reflecting varying levels of effort). However, we can protect the program from some financial risk by adjusting the budget-neutral conversion factor calculation by factoring in the additional consultations that are now included in the global fee by some carriers which will be billed by surgeons.

• *Preoperative Visits.* The majority of carriers presently have a global package which includes preoperative hospital and office visits for periods averaging 3 to 5 days. We believe that a global surgical package should reflect the total work required for the surgeon to complete the service once the decision for surgery is made. We are therefore recommending a preoperative policy that does not include a specific number of days, but instead includes all preoperative visits, in or out of the hospital, by the surgeon from the time of the evaluation/consultation where the decision to have the surgery is made.

(We would note that surgeons can always bill separately for services unrelated to the surgery regardless of when they were provided.)

We believe that this is the practice which most surgeons already follow today. A recent study by CHER of the 100 most frequently performed surgical procedures paid by Medicare shows that in the overwhelming majority of cases, physicians follow the global billing concept, i.e., they submit a single bill for all services associated with the surgery. Once the surgical evaluation/consultation is rendered, we do not believe that any additional visits by the surgeon are usually necessary until the surgeon sees the patient until shortly before the surgery in the hospital. Also, by not linking the policy to a specific number of days, e.g., 5, we are not as susceptible to "gaming," e.g., visits on day 6.

One possible objection to this policy is that it would not allow the surgeon to bill for services provided to seriously ill patients that need to be stabilized prior to surgery. However, we believe medical physicians, not surgeons, are responsible for stabilizing patients prior to surgery. For unusual cases where the surgeon is actively involved in treating the patient by providing visits before surgery, we would allow payment when documentation justifying the need for the surgeon's service is submitted. Another possible objection to this policy is that carriers may need a fixed number of preoperative days (e.g., 14 or 21 days) included in the global fee for operational reasons. We will be considering this issue further.

• *Intra-operative Services.* The AMA's CPT–4 contains codes and brief descriptions of all physicians' services. There is a general understanding by physicians and insurers that intra-operative services normally a usual and necessary part of a surgical procedure are included as part of the definition of a global service. We recommend that these intra-operative services be included in the definition of a surgical service. In addition, payment rules will be established to pay for other surgical procedures not included in the global fee. This "multiple surgery" issue is discussed later under standardization of payment modifiers.

We believe that whatever inconsistencies exist concerning what specific services should be included as part of a surgical procedure should be eliminated so that we will have a national uniform global policy. Our carrier medical directors have expressed concern that there is an even greater potential for unbundling of the intra-operative services than for pre- and post-operative services. We plan to work with the physician community, the PPRC, and the carrier medical directors to arrive at a clear understanding for all global surgery packages as to exactly what are the usual and necessary intra-operative services for each surgery.

• *Complications Following Surgery.* We would include services provided during additional trips to the operating room to correct for common complications (e.g., replacing stitches) in our global package. Many of our carriers already have such a policy. We believe that the global payment should cover all of the surgeon's services necessary for successful completion of the surgery in normal circumstances. We believe that this is the way most surgeons currently practice, and that they do not usually bill separately for such services. We do recognize that unforeseen circumstances can occur.

We are considering three methods of implementing this policy:

• One method would be to include all reoperations for complications that occur within a specific time period after the initial surgery. This period could be 24 hours, 72 hours, or the remainder of the inpatient stay. An exceptions process could be established for dealing with reoperations in highly unusual cases.

• Another method would be to compile a list of complications such as re-suturing, which if required, should be done at no extra charge by the surgeon. Additional payment would be allowed outside of the global fee for reoperations in other cases which because of the severity of the illness or other circumstances, could not ordinarily be anticipated or prevented.

• The third method would be to use a combination of a specific time period and lists. That is, a list of complications which should always be included in the global fee, regardless of the time period, would be combined with a time period during which no payment would be made for reoperations *unless* documentation of the highly unusual circumstances justifying additional payment is submitted.

These lists of complications could be general, or could be family or procedure specific. We are asking our medical advisors and the physician community for further guidance on this issue.

• *Post-operative Visits.* All carriers currently include post-operative services in their global package. The number of days varies by carrier and procedure. We recommend a standard 90-day post-operative period which would include all visits by the primary surgeon during this period unless the visit is for a problem unrelated to the diagnosis for which the surgery is performed. Although 90 days is ample for most surgeries, some—such as open heart surgery and certain orthopedic procedures—require a longer period for complete recovery. We propose using the 90-day period in most cases, and plan to seek advice from carrier medical directors and the physician community on the appropriate time frame for the small number of procedures requiring a longer period.

A global policy should be selected that is no less stringent than what exists at most carriers today. Indeed, a case could be made for a more stringent global policy than that existing today because of the added incentive provided for "unbundling" by the fee schedule. In either case, we do not believe the physician community would be disadvantaged in the aggregate by our recommendations because:

• The CHER data show that physicians rarely bill out of the global package now, regardless of the carrier global fee policy.

• In computing the relative values for the national uniform global surgeries, we will be adding the value of the visits presently paid separately by some carriers to the value of the surgery to arrive at a total value for the global surgery.

Carriers would then be instructed to vigorously enforce the new global definition to prevent physician gaming by "unbundling."

PPRC Recommended Definition

The PPRC surveyed all carriers for four of the most commonly performed surgical procedures, and found the same types of variations as did the HCFA survey. The PPRC then convened a consensus panel of physicians from the various surgical specialties and representatives of Medicare carriers. PPRC evaluated the carrier survey and the recommendations of the consensus panel and recommended the following national surgical global policy in its 1989 *Annual Report to Congress:*

- The principal surgeon's evaluation of a patient for a new surgical problem is not included in the global service.
- All preoperative hospital visits provided by the principal surgeon on the day before and the day of surgery are included in the global service.
- All institutional and outpatient visits provided by the principal surgeon during the 90 days following the primary operation are included in the global service unless the visit is for a problem unrelated to the diagnosis for which surgery is performed. Visits related to complications of surgery are included.
- All intra-operative services performed by the principal surgeon that are a usual and necessary part of the primary operation are included in the global service.

PPRC's policy would also apply to operations performed in inpatient and outpatient settings. The main differences between our and the PPRC's definitions are that we would include all visits by the principal surgeon from the time of the surgeon's evaluation or consultation while the PPRC includes only inhospital visits the day before and day of the surgery; for intra-operative services we would include some concurrent operations and re-operations for complications and the PPRC would not; and the PPRC would include all visits for a 90-day post-operative period, while we would use 90 days in all cases except for a few services which require a longer period.

Computing Work RVUs for Global Surgery

Once the definition of global surgical services is established, the Harvard work RVUs will have to be adjusted to reflect the policy definition. Since the Harvard RVUs will primarily represent inhospital services, the value of all other services to be included in the global payment must be incorporated into the Harvard value. This would include not only adding pre- and post-operative visits and consultations, but also developing a uniform national definition of exactly what intra-operative services are normally included in the surgery, and how this compares to what was included in the Harvard RVUs. During Phase III Harvard will perform further research on work for global surgery based on definitions that HCFA will supply.

This means that for each of the surgical global packages, we must determine the frequency and value of each surgery-related service to be included in the package. To do this will involve using a number of sources, probably in conjunction with each other.

- *Claims Data*—This information is readily available but has limitations. It will show the frequency of services billed and the payment amount for these services. However, it only shows services billed, not services that physicians presently provide as part of a global service and for which no bills are received.
- *Research Projects*—Under research sponsored by HCFA, CHER conducted a study of the 100 most frequently performed surgical procedures billed to Medicare. They examined the claims associated with surgeries for a sample of Medicare beneficiaries to see what other services are billed pre- and post-surgery.
- *Expert Panel*—Convene groups of physicians to develop a consensus on what services should be included as part of a global service on a procedure by procedure basis. This would, of course, be a time consuming, laborious process which could not likely be done prior to the April 1991 NPRM. The American College of Surgeons has already done this for a number of general surgery services for the PPRC. We can work directly with the AMA and other physician groups to convene these panels. We are also considering Harvard's proposal to include this as part of their refinement of the RBRVS. Other alternatives include using already existing internal sources such as HCFA, PHS, and carrier physicians.

As mentioned in Chapter II, overhead and malpractice RVUs are based on a percentage of the current average allowed charge. Data on charges will have to be adjusted for consistency with the global fee policy. Payments currently made for visits or other services might need to be packaged into the global surgical fee. This would have an effect on the average allowed charge of both the surgical service and the visits or other services.

Other issues related to global surgery—multiple surgery, bilateral surgery, and less than global surgery—are discussed in the section on payment modifiers in Chapter IV.

4. Minor Surgery and Nonincisional Procedures

Minor Surgery ("Starred" Procedures). In addition to the major global surgeries in the Surgery section of the CPT, there are a number of minor surgeries designated by a "star." These relatively minor surgical services involve a readily identifiable surgical procedure but include variable preoperative and postoperative services (e.g., incision and draining of an abscess) and are not traditionally paid using a global surgical concept. Because of the difference in preoperative and postoperative services, the CPT instructs physicians to bill separately for the procedure itself and any associated services or visits (e.g., hospital or office visit, cast change). However, CPT was established for reporting purposes only whereas HCFA can establish payment rules as to how to code for billing purposes.

Nonincisional Procedures ("Scopies"). In addition to major and minor surgeries, the surgery section of the CPT also includes the "scopies." These are diagnostic and/or therapeutic procedures (e.g., colonoscopy, cystourethroscopy) that are frequently performed by nonsurgeons, and may or may not involve actual surgery (e.g., removal of a polyp). They are done in both hospital and ambulatory settings. CPT does not specify whether visits are to be billed in addition to the "scopy" if a readily identifiable service (e.g., patient evaluation) is performed in addition to the "scopy." CPT billing instructions also state that when the scopy is diagnostic, follow-up care for these "scopies" includes only care related to recovery from the procedure itself. Care of the condition for which the diagnostic procedure was performed or of other concomitant conditions is not included and may be billed separately.

Preferred Approach. Presently, most carriers report that they conform to CPT coding rules with minor variations as to when visits are allowed in addition to the surgery or "scopy" being performed. However, in research on this issue, using 1986 claims data, CHER found that physicians do not often bill for office visits when performing endoscopies. Visit bills were submitted for only 18 percent of proctosigmoidoscopies, 10 percent of sigmoidoscopies, and 2 percent of other common scopies.

Under the RBRVS concept, our payments should reflect the actual work performed. If the sole purpose of an encounter is to have minor surgical procedure or "scopy" performed, there is no justification in paying for both a visit

and the procedure. On the other hand, if evaluative services are performed unrelated to the surgical procedure or "scopy", a visit could be paid.

We believe post-operative visit services related to the procedure (e.g., removal of sutures) should be included in the payment for the procedure. This will guard against excess billings for procedures not previously billed. We are therefore recommending that for "starred" procedures and "scopies" that no visit generally be allowed in addition to the surgical procedure or scopy unless a *documented* separately identifiable service is provided, and that post-operative services related to the procedure be included for a period of 30 days.

PPRC Recommendation

The PPRC recommends excluding "starred" procedures and "scopies" from a definition of global surgical services.

5. New Services and Local Codes

Current Use of Local Codes. As previously discussed, local codes (i.e., HCPCS level 3 codes) have been developed by carriers to determine and make payments for services that have no national code. Use of local codes has afforded carriers the ability to quickly and efficiently handle coverage of and payment for new services, services that are unique to a geographic area, and other services which are not described by national codes already in existence. However, the use of local codes has introduced some variation in payment policies among carriers.

Effort to Reduce Use of Local Codes. Physician payment reform is intended to provide for uniform application of payment policies between geographic areas. To achieve this goal, HCFA is reducing the number of local codes used by carriers. HCFA is currently reviewing local codes with a frequency exceeding 500 and/or allowed charges of more than $50,000. Carriers are reviewing codes which do not meet these criteria.

Whenever both national and local codes exist to describe the same service, a national code will replace each local code. Codes may be deleted if they are obsolete or if a carrier misinterpreted a CPT–4 definition and inappropriately used a local code. Carriers will identify replacement codes for local codes not being reviewed by HCFA.

As of July, HCFA has reviewed 1,160 physician services related local codes representing about $388 million in allowed charges in 1987 BMAD data. Since 1987, 187 of these codes have been deleted, 911 have been replaced with national codes, and 62 have been retained. These 62 retained local codes represent about $20 million in allowed charges in 1987 BMAD. We will recommend that these local codes be included in CPT–4 where appropriate.

Need for Retention of Local Codes for New Services. However, carriers will still need to retain local codes in situations where no national code and thus no RVU exists for a service. Under the current payment system, carriers pay for new services in a variety of ways, such as use of the prevailing charge for the service which most closely resembles the service being billed, or to pay the actual charge for the service until a charge history is developed.

HCFA expects to allow carriers to use local codes and RVUs with periodic review and approval from HCFA. Carriers would continue to develop local codes and RVUs. However, HCFA would periodically approve or disapprove of carrier use of local codes and RVUs or would determine new or replacement national codes and RVUs. This would allow carriers to quickly pay claims, but will provide HCFA with more control over the development of local codes.

8. Defining Geographic Localities

Current System. Under the present CPR system of payment for physicians' services, a Medicare locality is the geographic area which the carrier uses to determine the prevailing charges for services. There are presently 240 Medicare localities, which were developed by carriers, based on their knowledge of local medical practice and economic conditions. Some of the localities reflect political boundaries such as counties or cities, others are zip codes, some are metropolitan areas, and some are as small as parts of cities or as large as States. Many localities are actually noncontiguous areas that are treated as a single locality because the areas share common characteristics. Medicare locality boundaries have remained relatively stable since the inception of the program in 1965.

Localities Under the Fee Schedule. Section 1848(j) of the Act defines fee schedule areas as Medicare payment localities. However, recognizing the lack of consistency among current localities and the fact that significant demographic and economic changes may have occurred since the existing localities were established, Congress required in section 6102(d)(6) of OBRA of 1989 that the PPRC conduct a study to determine the feasibility of using some other configuration, such as States or MSAs, for payment areas under the fee schedule. The report is due July 1, 1991. Once this report is evaluated by the Administration and Congress, decisions will be made whether to retain or reconfigure the existing localities.

Under the current system, carriers are often required to "gap-fill" to compute prevailing charges. This occurs when insufficient charge data exist within a locality for a specific procedure or for a type of service or a certain physician specialty. One type of gap-filling involves combining data from all localities to compute a prevailing charge for a given service. Some carriers (typically those with a large number of localities within their service areas, e.g., Texas) construct a "super-locality,"—a combination of localities. These super-localities may even be assigned locality codes. This will not be necessary under the fee schedule.

As previously discussed in Chapter II of this report, GPCIs have been developed for all existing payment localities. Since a relative value will be computed for every physician service and a GPCI will be available for every locality, a fee schedule amount will be computed for every service for every locality. Even if a service was never previously rendered in a given locality a fee schedule amount will exist if that service is ever billed to the carrier in the future. All payments under the fee schedule will thus be made at the normal locality level, rendering existing "super-localities" obsolete. Thus, we will be reviewing the localities listed in Addendum C to determine which will no longer be necessary under the fee schedule.

Chapter IV Adjustments to Fee Schedule Payments

A. Site of Service Differential

Payments under the Medicare fee schedule are designed to reflect the resource inputs used by a physician to provide a service. Measurements of these resources will be incorporated into relative value units which, as described earlier, will be the basis for determining the Medicare fee. The relative value will be comprised of work, practice and malpractice cost components.

The practice and malpractice components of the relative value should reflect practice and malpractice costs, which may vary by site of service. For instance, some practice and malpractice costs—those directly associated with providing a service—may vary depending upon whether the service is performed in a physician's office or in a facility. Examples of direct practice costs are equipment, supplies and personnel used to perform the service

itself. Office rent, utilities, and billing clerks are examples of indirect costs. Malpractice costs may also vary by site of service as there will be liability costs associated with the functioning of equipment and employees. Physicians using equipment in their offices could have higher malpractice costs than those using equipment owned by a facility.

We are considering providing differential payment based on site of service under the fee schedule. Site of service differential as it applies to physician visits has already been discussed in Chapter III. The discussion that follows therefore is limited to non-visit physician services that can be performed in more than one setting. (Radiology and diagnostic test procedures represent another "special case." Later in this chapter we discuss setting payment amounts for professional and technical components of these services.)

In addition to our desire to vary payment amounts based on differences in resource costs, we are also considering differential payment based on site of service in order to provide incentives for physicians to perform procedures in the most appropriate setting. By providing additional payment for services that can be safely performed in an office, Medicare would encourage provision of the services in offices and would incur lower total costs than if procedures continued to be performed in inpatient and outpatient hospitals and other facilities. Additionally, we are considering a payment limit on office-based procedures (procedures routinely or typically performed in offices) performed in an outpatient hospital department to reflect differences in practice costs and to maintain incentives for providing these services in physicians' offices.

Currently, there are two situations in which Medicare rules either limit or provide additional payment for a physician service depending upon the site where the service is rendered. The two situations are as follows:

- Outpatient Limit

Sections 1842(b)(3) and 1861(v)(1)(K) of the Act, as enacted by the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), authorize the Department of HHS to limit payment for a service routinely performed in a physician's office if the service is provided in an outpatient hospital setting. Implementing regulations at 42 CFR 405.502(f) establish the limit at 60 percent of the prevailing charge. Since a portion of the payment for a physician service includes overhead expenses, the outpatient limit is applied to avoid paying both the physician and hospital for the cost of such overhead expenses as equipment and supplies which are incurred by the hospital. The outpatient limit has been criticized for discounting all overhead expenses from physicians' fees without recognizing that some overhead expenses (e.g. billing and malpractice) are borne by the physician regardless of site of service.

- Payment for Incidentals

Payment for services and supplies that are incidental to a physician's service is currently made separately by some carriers. In this case, additional payment is usually made when a service has moved from the hospital to the physician's office setting. The additional payment is made to compensate the physician for the extra cost of incidentals that would otherwise be borne by the hospital and that are not included in the carrier's physician service allowance.

We would note that additional payment for designated services is provided when a surgical procedure routinely performed in a hospital inpatient setting is provided in an ambulatory surgical center (ASC). An ambulatory surgical center can be a doctor's office or part of a hospital which has been certified to receive Medicare payment for certain inpatient procedures which have been determined to be safe to perform in an ambulatory setting. For those procedures which can be performed in ASCs, Medicare pays both the physician's surgical fee plus a separate facility fee. The additional payment, the ambulatory surgical center fee, is provided to give physicians an incentive to move a service from a hospital inpatient setting to a less expensive outpatient setting.

Options Under A Fee Schedule

As detailed in Chapter II, OBRA of 1989 prescribes a methodology for computing overhead and malpractice RVUs by applying historical practice cost percentages to base allowed charges. Section 1848(c)(3) of the Act as added by OBRA of 1989 also gives the Secretary the authority to develop policies with respect to the use of modifiers and other "ancillary policies" needed to establish a Medicare fee schedule based on relative value units. Based on these legislative authorities, there are several options regarding differential payments based on site-of-service under the fee schedule. Options being considered are described below.

Option 1—Pay the Same Amount for Physicians' Services Regardless of Site of Service

Under this option, payment would not vary by site of service. Payment would be the same regardless of whether the service was performed in an office or non-office setting. There are two general approaches under this option which we are considering.

Option 1(a)—Base Payment on Practice Costs in the Dominant Site of Service

Although payments would not vary by site of service under this option, practice and malpractice costs would be based on the dominant site of service. For services performed predominantly in an office, payment would reflect practice and malpractice costs in the office setting. For services performed predominantly in non-office settings, payment would reflect non-office practice and malpractice costs. There would be no limitation for office-based procedures performed in a facility or additional payment for facility-based procedures performed in an office.

Because payments would reflect practice and malpractice costs in the dominant site of service, payments would be too high or too low when the service was provided in the site that did not predominate. For instance, if the office site were dominant, payment to the physician would be too high when the service was provided in the non-office setting. This would occur because practice and malpractice costs not incurred by the physician would be included in the payment. In this case, there would be inappropriate incentives to perform a service in a non-office setting. Conversely, if a non-office site were dominant, payment to the physician would be too low when a service was performed in an office. This would occur because practice and malpractice costs incurred by the physician in an office would not be included in the payment. In this case, physicians would not have a financial incentive to perform facility-based procedures in their offices.

Option 1(b)—Base Payment on Practice Costs Averaged Across All Sites of Service

Under this option, there would be one practice cost relative value based on the weighted average practice costs across all sites. Similar to option 1(a), payment would not vary by site of service.

Option 1(b) would provide payments that were too high or too low regardless of whether the service was provided in the predominant site of service. Since a physician's practice costs would be less

in the hospital setting, providing compensation based on a weighted average would lead to excessive payment for services provided in hospitals. Conversely, services provided in the office would be underpaid. Thus, this approach would provide incentives to perform services in a hospital that could be more appropriately performed in an office.

Option 2—Vary Payment by Site of Service

Under this option, payment would vary by site of service. Again, there are two general approaches.

Option 2(a)—Base Payment on Office or Non-Office Practice Costs

Under Option 2(a), different practice and malpractice cost relative values would be developed for office and non-office settings. The appropriate practice cost relative value unit would be applied to determine the physician's fee. For instance, if a service were performed in an office, the payment amount would reflect office-specific practice and malpractice cost RVUs. If the service were performed in a facility, payment would reflect the non-office practice and malpractice cost RVUs.

An advantage of this approach would be that payments would reflect incurred practice and malpractice costs regardless of where the service was provided. Under this option, physicians might have incentives to perform facility-based procedures in their offices since, by performing facility-based procedures in their offices, they could receive higher Medicare payments. Although the higher payments would reflect office practice costs, the administrative convenience of performing services in their offices might in some instances provide sufficient incentive to encourage inappropriate movement of hospital services to the office setting. This problem would be alleviated if a list of hospital-based services that could safely be performed in an office setting were developed.

A major difficulty with this approach is that practice cost data by procedure for office and non-office settings do not presently exist and would be expensive and time-consuming to collect and maintain. PPRC is currently exploring estimating practice costs through surveys of physicians' practices and from studies of individual medical practices. However, this work is not expected to yield the comprehensive and detailed data that would be needed for Option 2(a) in time for initial fee schedule implementation.

Option 2(b)—Provide Differential Payments in Limited Circumstances

Another approach would vary payment based on site of service following, to a large extent, the framework in present law. Because it would use existing categories, it would be much more feasible to implement by January 1, 1992 than Option 2(a). Under this option, payment would be as follows:

- Office-based procedures performend in an outpatient setting would be subject to the outpatient limit. We would have to determine the magnitude of the limit under the fee schedule.
- The ASC payment would be continued. That is, we would continue to pay for the physician's service and a separate ASC facility fee.
- For certain facility-based procedures that we have determined to be safe to perform in a physician's office, an additional payment would be made as part of the physician's fee for the cost of equipment, supplies, and other direct expenses incurred in the physician's office.

This policy retains both the ASC payment and the outpatient limit, making it similar in those respects to current policy. However, under this policy, we would not allow separate billing or payment for incidentals as some carriers do currently. Another distinction between this option and current policy is that we would provide additional payment for certain facility-based procedures which had been determined to be safe to perform in a physician's office.

Since this option provides for differential payments based on site of service in specified circumstances, physicans in those circumstances would be given incentives to perform procedures in settings where costs were lower. Also, when payments differed based on site of service, payment amounts would reflect differences in practice costs. Both these goals, however, would not be achieved or would not be achieved fully if we did not provide the appropriate limitation or additional payment. If additional payment for services that are safe to perform in the office were too low, physicians might continue providing these services in hospital or other facilities. If payment were too high for an office-based procedure peformed in another site, physicians would have less incentive to perform the service in their offices.

B. Professional/Technical Component

"Professional" and "technical" modifiers have been established for some part B physician services in order to acknowledge in the payment system that physicians should be compensated differently depending on what portion of the service they actually provided. The professional component is presumed to include the physician's work in interpreting the test result in the case of diagnostic services and in managing the administration of therapy in the case of therapeutic radiology services. The technical component encompasses the cost of the equipment, the salary of a technician, films, etc. A "global" charge refers to when both the professional and technical components are provided.

In some cases, the professional/technical component modifiers serve much the same purpose as a site of service differential, since whether a physician, such as a radiologist, incurs the costs of employing technicians and purchasing equipment used to furnish a service will often depend on whether the service being provided in the physician's office or in a hospital or other facility. However, if a physician furnishes a service to a hospital inpatient or outpatient, the physician is permitted to bill only for the professional component.[4] Moreover, even radiologists furnishing services in their offices may need to bill only for a professional component payment if, for example, the only service rendered was interpretation of an x-ray while the actual test was conducted elsewhere. Thus, the professiona/technical component distinction hinges on the site of service, the status of the patient and the nature of the service actually provided.

Under the current payment system there are three types of physicians' services that use the professional/technical component distinction. One group is diagnostic and therapeutic radiology services, first discussed in chapter II. A second group is certain diagnostic tests which involve a physician's interpretation. These include, for example, the electrocardiogram (ECG) and electroencephalogram (EEG). All carriers have reasonable charge screens or, in the case of radiologist services, fee schedule alowances for professional, technical, and global charge services.

[4] Note: This is true even if the service for a hospital patient is performed in a physician's office because of the requirement in the statute for all non-physican services provided to hospital patients to be paid only to the hospital.

The third group is made up of physician pathology services (primarily anatomic pathology). As described in chapter II, these services are currently paid on a customary, prevailing, and reasonable charge basis, although OBRA of 1989 contemplates a separate physician pathology service fee schedule beginning January 1, 1991. Although we do not now expect to implement this provision (for the reasons discussed in chapter II), our analysis leading up to implementation led us to conclude that it is very difficult to arrive at reasonable estimates of the cost (or value) of the technical components of pathology services. Some carriers do not distinguish payment for professional and global pathology services. In other cases, payment distinctions based on historical charges are irrational.

We considered basing the technical component as equal to the difference in average allowed charges for global pathology services (provided by independent laboratories) and professional component only services provided for hospital patients. However, the data did not support any rational comparison. Our operating assumption at this time is that the technical component cost is limited; virtually all the physician resources required are contained within the professional component. However, the College of American Pathologists is interested in pursuing this issue and has contracted with Abt Associates to do further analysis of technical component costs.

Treatment of Technical Component Services Under the Fee Schedule

At this time, we propose to treat technical component services as follows under the fee schedule, although the availability of data and other considerations could lead us to modify or reconsider these approaches over the coming months.

Radiology Services. 1. The global RVU will be the sum of the professional component and technical component RVUs.

2. The professional component RVU value will be derived from the existing radiologist fee schedule (as adjusted to be consistent with the Harvard data as discussed in chapter II) and divided into physician work, overhead, and malpractice components. The allocation of RVUs into these components (necessary for application of the geographic adjustment factors) will be based on historical practice cost percentages for radiologists who do not own their own equipment.

3. The technical component RVU value from the existing radiologist fee schedule will be treated essentially as practice costs are treated for all other physician services. That is, the technical component RVUs under the fee schedule will be equal to the estimated average allowed costs for each service determined by multiplying the radiologist fee schedule technical component RVUs for each service by the estimated national average conversion factor under the radiologist fee schedule. We are considering two options for the application of the GPCIs to technical components. One would be to subject the technical component to the overhead GPCI only. The other option would subject the technical component to both the overhead and the malpractice GPCIs. The justification for the first option is that there is a lack of data on malpractice costs for nonphysician providers technical services. The justification for option 2 is that it might be accurate (even if more complex) since there is likely a malpractice expense associated with the technical component.

Under the second option, the portion subject to each GPCI would be derived from historical practice cost data (for radiologists who do own their own equipment) to allocate all RVUs between the two remaining components—overhead and malpractice. For example, assume that the technical component RVU for a service was 100 and historical practice cost data showed overhead costs equal to 45 percent of revenue and malpractice costs equal to 5 percent of revenue. Setting work RVUs equal to zero, the total RVUs of 100 would be allocated 90 to overhead and 10 to malpractice.

As discussed in chapter II, all these RVUs based on the existing radiologist fee schedule would need to be rescaled to be expressed in the same units used for Harvard-produced physician work RVUs before payment amounts were computed.

Diagnostic Tests. The professional component of diagnostic test services provided by physicians will be treated like other physicians' services under the fee schedule. We will use the Harvard physician work RVU value and derive the overhead and malpractice RVUs from charge data.

We see two possible approaches to the technical component for diagnostic tests.

1. We could derive the total RVU value for the technical component service from the Harvard study. For purposes of applying the GPCIs, physician work would be presumed to be zero; the technical component would be considered to be overhead only or alternatively split into overhead and malpractice portions and allocated based on historical practice cost data for physicians performing the service.

2. Alternatively, we could disregard the Harvard study value for the technical component and develop an RVU based on current average allowed charges. The rationale for this approach would be that Harvard's technical component values are based strictly on extrapolation; they infer values for technical components based on the relationship between professional and technical components in historical charges with that relationship maintained under the RBRVS. The alternative approach would presume that current average allowed charges for technical components represent practice costs for providing the technical service. Note: Under this approach, where reliable technical component charges to not exist, they would be computed as the difference between the average allowance for the global service and the professional component.

At this time, we expect to use the second approach since the Harvard study has focused on physician work rather than the technical component.

Physician Pathology Services. Until such time as better data are available, including the results of the Abt study mentioned above, we are considering two options. Under one option, we would impute a technical component payment equal to a nominal percentage, say, 10 or 15 percent of the global fee under the fee schedule, until we had better data. Under a second option, we would assume that the technical component of physician pathology services is negligible and no distinction would be made between global service and professional component pathology services in computing payment amounts under the fee schedule.

C. Payment Modifiers

Background

There are two types of modifiers under the current payment systems. Modifiers to the procedure codes are used either to establish different payment amounts or to record descriptive information which does not affect payment levels. There are three levels of modifiers for HCPCS codes: Level 1 are CPT modifiers, level 2 are national HCPCS modifiers established by HCFA, and level 3 are local carrier unique modifiers. Carriers have always had autonomy in the use of other modifiers to reflect local practices (including local carrier unique modifiers). Transition to a national Medicare fee schedule requires

standardization in the use of all modifiers.

We anticipate that only modifiers for which we establish a national payment policy will affect payment. If there is no national payment policy governing the use of a modifier, there will be no differential payment based on the presence or absence of that modifier. However, we expect to permit carriers to continue use of local modifiers when they are used for purposes *other than payment* (e.g. utilization or medical review screening).

Multiple surgery (CPT 4 modifier 51 or code 09951) Sometimes surgeons perform more than one procedure during an operative session, resulting in the use of the multiple surgery modifier in billing for the procedures. BMAD data for 1988 indicate that the multiple surgery modifier was used for over 1.5 million allowed services.[5] When more than one procedure is performed, the issue arises whether Medicare should increase payment for the surgeon's services. Since payment for most surgical services is made on a global fee basis, we need to determine whether additional procedures performed are separate procedures which are separately billable or whether these additional procedures are incidental to the primary surgery and thus not separately billable.

As a practical matter, this requires a precise definition of the intra-operative procedures included as part of a primary surgery procedure so that we do not inappropriately make duplicate payments for procedures which are already included in the global fee for the primary surgery. We have recently received data from PPRC and the carriers that we will use to help do this. We intend to consult with PPRC, physician groups, and carriers to develop these definitions, and means of identifying when the use of multiple surgical modifiers is appropriate and inappropriate. As discussed in chapter II, the clarification of intraoperative procedures will affect the estimated frequency of services needed for computing the budget neutral conversion factor.

Carriers generally make additional payments to surgeons for additional procedures not incidental to the primary surgery. Carriers vary in the amounts of these adjustments, but most carriers make an adjustment of 50 percent for the next highest procedure, and additional payments of 20 percent to 50 percent for other procedures. Some carriers add adjustments for an infinite number of procedures, and some carriers will add adjustments for no more than 3 procedures.

The Harvard study did not measure or assign work values to the amount of added work associated with performing multiple surgical procedures. This is an area that needs to the studied in the future. Until better data is available, we see several different approaches we could take in establishing the national policy for payments for multiple surgeries. For example, we could establish a general policy using standard percentages that would be applied to the global payment amounts for any multiple surgery. Alternatively, we could base the adjustment on either the relative values or a standard percentage of the intra-operative work for the specific procedures that were performed.

If we establish a general policy using standard percentages that would be applied to the global fee amounts for the procedures performed, the policy will be easy to understand and easy to administer. We might apply the current practices of many carriers to the fee schedule by providing for 100 percent payment for the most expensive procedure, 50 percent payment for the second highest procedure and 20 percent for the third highest procedure, with a limit of payment for three procedures, regardless of the number actually performed.

A variation on this option might be to pay a different percentage, say, 40 percent (rather than 50 percent) of the fee schedule amount for the second procedure. Another option would be to base the add-on only on the intra-operative work of the second and subsequent procedures. The rationale for this option is that the intraoperative work would be less if additional surgery is performed through the same incision. Further, the pre- and post-operative work of multiple procedures does not increase to the same degree as the intra-operative work. Thus, we could pay a specified percentage, perhaps 40 or 50 percent, of the intra-operative work value for the second procedure, with lower percentages applying to any other procedures performed.

Yet another option would be to include payment for multiple procedures in payment for the primary procedure. This could be done, for example, by raising the relative values for the primary procedure by a proportional amount to reflect the average occurrence of bills for secondary procedures. This could be justified on the basis that payments for second and third procedures would average out among physicians performing primary procedures.

At this point, we anticipate establishing a general payment policy for multiple surgeries similar to that currently used by many carriers, such as paying 100 percent of the global fee for the most expensive procedure and 50 percent of the global fee or perhaps (more narrowly) of the intra-operative work portion of the global fee for the second most expensive procedure. If we allow payment for a third procedure, it would likely be limited to 20 percent. In any case, we do not expect to make additional payments for more than 2 or 3 procedures. This policy would apply whether one or more than one surgeon provided the services. However, as we acquire more information and experience with the Medicare fee schedule, we will review our policy on payment for multiple surgeries.

Where several surgeons each perform distinctly different unrelated procedures during a single operative session, the multiple modifier would not be used unless one of the surgeons performed multiple surgeries. Each physician would be paid for the surgery he or she performed.

Bilateral surgery (CPT 4 modifier 50 or code 09950) The bilateral modifier is used to indicate cases in which a procedure was performed on both sides of the body. BMAD data for 1988 indicate that there were almost 900,000 Medicare allowed services with this modifier. The issues in determining what kind of payment adjustment to make when the bilateral modifier is shown are quite similar to the issues that arise with regard to the multiple surgery modifier. We will need to identify surgical procedures which are typically bilateral in nature (e.g., 58600: "Ligation or transection of fallopian tube(s), unilateral or bilateral") and for which the bilateral modifier would not result in increased payment. We will consult with physician groups as to what services are typically bilateral and with carriers to determine when payment should be increased because of the bilateral modifier.

Carriers have typically paid 150 percent of the payment amount when they believed that the use of the bilateral modifier justified increased payment to the surgeon. As with the multiple modifier, we are considering several different approaches to increasing payment for services when

[5] Modifier usage reported in this section may be understand due to use of local modifiers in place of the established modifiers, and because physicians do not consistently report them. Thus, the frequency and expenditure data for modifier usage presented throughout this section must be considered minimums.

the bilateral modifier is appropriately used.

We could continue the historic practice of paying 150 percent of the global fee, by applying the 150 percent to the Medicare fee schedule amount since we have no information by which to judge the appropriateness of this adjustment. Slight variations of this are being considered, such as to pay 40 percent (rather than 50 percent) of the fee schedule amount for the second procedure. While a break with historic practice, this reduced payment amount may more appropriately avoid duplication of payment for work and overhead for bilateral procedures. The use of a standard payment adjustment without regard to the particular bilateral procedure being performed would be easy to understand and to administer.

Another option would be to adjust the payment to the surgeon by doubling the intraoperative work RVUs on a procedure by procedure basis so that the surgeon would be paid the full work RVUs for the intraoperative work, but for no additional preoperative or postoperative work. The payment adjustment would be more complex, including the additional complexity of determining whether there had been duplication within the intraoperative work (e.g., if only one incision is needed) that should be removed.

As discussed under multiple procedures, we could address the potential for duplication of work in the intraoperative work relative value for bilateral procedures by paying a percentage of the intraoperative work relative value for the second procedure (e.g., 40 or 50 percent).

At this point, we expect to use a general payment adjustment of 150 percent of either the global fee or perhaps (more narrowly) the intra-operative work portion of the global fee in cases in which the bilateral modifier should appropriately result in increased payment. However, as we acquire more information, we will review our decision.

Providers Rendering Less than the Global Fee Package (CPT 4 modifiers 54 or code 09954, 55 or code 09955, and 56 or code 09956) When more than one physician provides services that are part of a global surgical fee package, the following modifiers are used to identify the services provided by each:

—Surgical care only: modifier 54 or code 09954

—Preoperative management only: modifier 56 or code 09956

—Postoperative management: modifier 55 or code 09955

BMAD data for 1988 indicated almost 18,000 allowed services in which only intraoperative services were billed (modifier 54), about 117,000 allowed services in which only post operative services were billed (modifier 55), and about 72,000 allowed services in which only preoperative services were billed (modifier 56).

Under the current reasonable charge policy, the sum of all allowances for all practitioners who provided parts of the services included in a global fee (and who billed using one or more of these modifiers) are not to exceed the total amount of the allowance that would have been paid to a single practitioner under the global fee for procedure. This has been an issue, in particular, for global surgical packages in which some services are provided by ophthalmologists and optometrists. It has also been an issue when cardiologists provide some of the postoperative services included in a global fee for cardiac surgery provided by a thoracic surgeon.

We expect to continue to pay the same amount for surgical services when they are provided by several physicians as we would pay if only one physician provided all of the services in the global package. However, we need to establish national policies regarding how payment for these services will be made. Specifically, we need to decide whether carriers will pay each physician separately for his or her part of the service or whether the carrier will pay the surgeon, who will then decide the payment among the physicians who provide the pre and/or postoperative services. In addition, we need to decide how the global fee will be divided among physicians: whether there will be a standard percentage distribution that will apply to all global surgeries or whether the division will vary by procedure.

One alternative on the billing/payment issue is for each physician to bill using the appropriate modifier and the carrier to pay each physician directly for the services he or she provided to the beneficiary. This could be difficult for carriers to administer if physicians do not use the appropriate modifiers; overpayments and/or denials could result and resolution becomes problematic.

If this option is chosen, in order to reduce duplicate payments, we could use computer-matching to identify instances where several physicians billed for services for the same patient within a time period around the use of an operating room and check whether reduced modifiers were being used appropriately. However, computer-matching will not fully resolve these issues because patients may have multiple conditions and several physicians may be appropriately billing unreduced modifiers during any given time period. Detailed medical review to determine legitimate unmodified bills from duplicate bills may also be required to the extent administratively feasible and cost justifiable.

The second alternative is to permit only one practioner to bill for the global services (e.g., the operating surgeon), regardless of how many practitioners provided services included in the global fee and regardless of the extent of their services. However, this alternative may be problematic for the physician who would have to rely upon the primary practitioner for payment because it would require physicians providing different parts of the global package to negotiate payments among themselves. It could be difficult to distinguish between appropriate distributions of the global fee and illegal kickbacks or referral fees. Also, the limiting charge and copayment would be based on the global payment and on the assignment status of the primary provider, which may cause beneficiaries confusion with regard to their liability for charges from the other providers.

While administratively it would obviously be simpler to make a single global fee payment to a primary provider for all of the services required during the global period, there are substantial legal and practical impediments to this approach. Therefore, in the absence of a change in the statute, we expect to permit separate billing and separate payment to physicians who provide parts of the services paid under the global fee (not to exceed what would be paid to a single physician). However, we intend to explore development of legislative proposals that would resolve the legal and practical impediments to making payment to a single provider regardless of the number of providers who rendered services within the global package.

There are several alternatives regarding establishment of the payment differentials for parts of the global fee. We could establish a standard split (e.g., 5 percent preoperative, 80 percent intraoperative and 15 percent postoperative) that would be applied to the global fee regardless of the procedure (or combination of procedures). This would be easy to administer and easy to understand. However, regardless of the percentages we choose, it is unlikely that we could

choose one that would apply equitably to all procedures.

A second approach would be to divide the global fee based on the work RVUs or the total RVUs in each component. This would mean establishing a different percentage for each procedure and would be more complex to administer.

Moreover, under both of these alternatives, there may be additional complications when postoperative services are divided between physicians (e.g., inpatient care vs. outpatient care). We would need to decide in such cases whether to split the postoperative payment further and on what basis to split it (e.g., a per diem rate, a per visit rate).

At this point, we anticipate establishing the global payment based on the second approach. In the unusual cases in which several physicians provide post-operative services, the payment for the post-operative services would be divided between the physicians based on the number of days for which each physician was responsible for providing post-operative care. In these cases, the physicians would be required to indicate when responsibility for the post-operative care shifted from one physician to the other so that carriers could calculate the payments on an individual case basis.

Physicians who assist at surgery (CPT modifiers 80 or code 09980, 81 or code 09981, and 82 or code 09982). There are circumstances in which a surgeon requires the assistance of another physician in surgery.

Current payment policy provides that payment for an assistant at surgery may not exceed 20 percent of the prevailing charge for the surgical procedure. Wide variations in the use of assistants at surgery and the substantial use of primary care physicians as assistants at surgery, suggests that the use of assistants at surgery is largely at the discretion of the surgeon and may frequently not be medically necessary. As part of its fiscal year 1991 budget, the Administration has proposed that Medicare pay the same amount for a surgical procedure regardless of whether or not the primary surgeon elects to use an assistant at surgery to whom Medicare makes a separate payment. Any payments made to assistants at surgery would reduce the payment to the primary surgeon.

We think that the likely reduction in payment to surgeons under the RBRVS will provide incentives for surgeons to use each other as assistants at surgery and thereby to recoup some expected losses. At the same time, one can argue that the Harvard RVUs for surgical services are the same whether or not an assistant at surgery was used. While an assistant may provide "another pair of hands" to, for example, hold a retractor, absent the physician assistant at surgery, this service is frequently performed by an operating team nurse, physician assistant or resident.

In light of the above, we are considering numerous options, not necessarily mutually exclusive, for dealing with assistants at surgery under the fee schedule:

—Eliminating all payment for assistant at surgery under the fee schedule, on the grounds that the RVS reflects the total work of the surgical procedure and that the medical necessity for use of physicians as assistants has not been established.

—Establishing with physician groups a list of specific procedures/conditions warranting use of an assistant at surgery for which we would pay 20 percent of the surgeon's fee. We would note that the American College of Surgeons has agreed to furnish PPRC by the fall of 1990 a listing of procedures which in their judgement always, never or sometimes require an assistant at surgery.

—Retaining the current policy of paying 20 percent of the primary's surgical fee to physicians who assist at surgery.

—Paying 20 percent of the intra-operative portion of the global fee so that payments would not be based on preoperative and post-operative services that the assistant at surgery does not provide.

—Paying 20 percent of only the physician's intra-operative work component (e.g., excluding overhead related to the intra-operative work). This would not only prevent payment for preoperative and post-operative services the assistant does not provide, but avoid payment for overhead that might not be as great for assistants at surgery as for the primary surgeon.

—Pay for assistants at surgery only upon the authorization by a Peer Review Organization (PRO) (i.e., prior authorization except for emergency surgery). This would create an incentive to use physicians as assistants at surgery only when necessary.

Two surgeons and surgical team (CPT 4 modifiers 62 or code 09962 and 66 or code 09966). We recognize that there are valid circumstances when the procedure being done requires the participation of two surgeons or a surgical team (more than 2 surgeons). In these cases, the additional physicians are not acting as assistants at surgery, but because of the procedure (or procedures) and/or the patient's particular condition, two surgeons or a surgical team are required to meet the patient's surgical needs.

Under the fee schedule, one alternative would be to divide the global payment for the procedure evenly between the surgeons involved. In this way, we would not create an incentive to use more than one surgeon.

As in the case of physicians who serve as assistants at surgery, we have no specific information on the physician work involved when two surgeons or a surgical team share the work that would justify increased payment for these surgeries when two surgeons or a team is used rather than one surgeon. Similarly, the argument can be made that the RVUs presented represent all of the physician work in the surgery, regardless of the use of two surgeons or a surgical team. As with assistants at surgery, we have come to no conclusions on whether to make additional payment because of this modifier. We expect to consult with physician groups to obtain further information on this issue.

Unusual services (CPT 4 modifier 22 or code 09922) or reduced services (52). There are cases in which the service provided is greater than or less than that usually required for the listed procedure. In these cases, the unusual services modifier ((22) or code 09922) or the reduced services modifier (52) is used. In 1988, BMAD indicates modifier 22 was reported in about 1.5 million allowed services and modifier 52 was used for almost 4.3 million allowed services. We are considering whether to permit carriers to increase or decrease payment for very unusual circumstances, based on their review of applicable medical records or other documentation. We would expect these cases to be very rare because the RVU based payments will be computed as an average payment, recognizing that there is variation among individual patients treated.

Multiple modifiers. Carriers vary in how they pay for and process claims with multiple modifiers. In practice, all modifiers that apply are used on the claims unless the carrier's claims processing system cannot accept multiple modifiers. In that case the CPT–4 modifier "99" or code "09922" is used to flag the claim for manual processing.

A national policy regarding the application of multiple modifiers is necessary in order to establish nationally uniform and consistent payments. There are several different approaches. We could apply each of the separate payment adjustments that

apply to each modifier. However, under this option, the potential exists for the payment to far exceed what payment would have been for the procedure without modifiers. Moreover, the appropriateness of the payment adjustments becomes increasingly difficult to judge when there are multiple modifiers.

Another possibility is to specifically limit the amount of payment adjustments that could be made to a fixed percentage of the base payment for the procedure. For example, pay no more than 160 percent of the global fee, regardless of the number of modifiers that apply. However, this could be difficult to define and to apply since several of the most commonly used modifiers are used when more than one procedure is performed (e.g., multiple surgeries and bilateral surgeries).

A third option is for us to specifically limit the number of modifiers that could apply. For example, we might only adjust payment for a maximum of two modifiers. Physicians would be instructed to include only a maximum of two modifiers on the bill and carriers would apply the applicable modifier policies if they determined that the two modifiers were appropriate.

Limiting the number of modifiers that would result in payment adjustments to a maximum of two modifiers seems to be a reasonable solution. It provides for payment increases in the unusual circumstances in which more than one modifier is appropriate, but it limits the additional complexity and payment to two modifiers of the physician's choice (with carrier review of necessity). Moreover, it may moderate any incentive to maximize use of modifiers to increase payment for surgical service. In any case, the physician could use the unusual circumstances modifier (22) which would request carrier review.

We expect to work closely with physician groups to establish nationally uniform policies as to when use of multiple modifiers is appropriate and to ensure that our policy in this regard is in accord with acceptable standards of practice.

Multiple patients and single patient modifiers on nursing home visit bills (HCPCS alpha-numeric modifiers MP and SP). The multiple patient (MP) and single patient (SP) modifiers are currently used to identify visits to patients in nursing or domiciliary care homes (other than skilled nursing care facilities). Our current payment policy limits payment for routine visits to multiple patients in these facilities to payment that would be made for a follow-up office visit. Payment for a routine visit to a single patient in one of these facilities is limited to what payment would be for a follow-up home visit. Payment for a visit to treat an acute condition is made of whatever visit level reflects the services provided, regardless of the number of patients seen at the facility.

The Harvard team will provide us with values for the physician work involved in visits to patients in these facilities, and the practice expense and professional liability insurance relative values will be calculated based on the historic allowed charges for these services. After we receive the data, we will consider whether to continue the current payment policy for these services and whether to continue use of these modifiers.

Services of non-physician practitioners when there is no physician-patient encounter. We may want to establish a payment differential and a corresponding modifier for services provided by a non-physician practitioner without a physician-patient encounter. For example, when a beneficiary visits a physician's office for a minimal office visit with a nurse practitioner who is employed by the physician, should Medicare pay for the visit as it if were done by a physician? The payment that will be established under the Medicare fee schedule is based on the assumption that there is physician work in the visit since Harvard's RVUs are for physician work. When there is a physician-patient encounter as well as an encounter between the non-physician practitioner and the patient, the visit would be billed as a physician visit. However, if there is no physician-patient encounter during the visit, then the resources invested by the physician in the visit are practice expenses (employee salaries, fringe benefits, supplies, etc.) and malpractice expenses.

One option is to pay the same amount whether it is performed by a physician or a non-physician practitioner. This option pays physicians for work they did not personally perform but appears consistent with our current policy (see section 2050 of the *Medicare Part B Carriers Manual*).

Another option is to compensate physicians for only the practice expense and professional liability portions of the payment for the service when it is not provided by a physician. This creates an incentive for the physician to see the patient for at least a brief moment so that he can bill for the visit at the higher physician rate.

A third option is to include part of the physician work RVU in the payment amount since the physician takes professional responsibility for the services provided by the non-physician practitioner in his employ and can arguably be thought to provide professional services to the patient through supervision of the non-physician practitioner.

We are undecided on how we will address payment for non-physician practitioners employed by physicians under the Medicare fee schedule when there is no patient-physician encounter. We expect to continue to consider the alternatives regarding this question. In addition, the PPRC expects to investigate this issue through the coming year, as mentioned in chapter 2, and we hope that effort will provide additional information regarding this issue.

Modifiers That Will Not Affect Payment Levels. The presence or absence of the following modifiers will not affect (increase or decrease) payment levels under the Medicare fee schedule, although they may continue to be used for administrative purposes, including utilization reviews.

• *CPT 4 modifiers that will not affect payment:*

20 Microsurgery
23 Unusual anesthesia
32 Mandated services
47 Anesthesia by surgeon
75 Concurrent care
76 Repeat procedure by same physician
77 Repeat procedure by another physician
90 Reference laboratory

Similarly, we expect to exclude from consideration for payment purposes CPT codes for special services and reports that serve a similar purpose as the unusual services modifier. For example:

—"After hours" services codes 99050 and 99052
—Extra supplies and materials codes 99070 and 99071
—Prolonged physician attendance codes 99150 and 99151
—Unusual travel code 99082

• *HCPCS alpha-numeric modifiers that will not affect fee schedule payment amount*

AT Acute treatment
ET Emergency treatment
LT Left side of body
QC Single channel monitoring
QD Recording and storage in solid state memory by digital recorder
QT Recording and storage on tape by an analog tape recorder
RT Right side of body
SF Second opinion ordered by a Peer Review Organization[6]

[6] When a second opinion is ordered by a Peer Review Organization (PRO), the law specifies that payment will be made at 100 percent of the fee

Continued

YY Second surgical opinion
ZZ Third surgical opinion

• *Carrier unique local modifiers (HCPCS level 3 modifiers beginning with the letters w,x,y, or z)*

No payment differential will be allowed based on carrier unique local modifiers, although carriers may continue to use carrier unique local modifiers for medical review, screening and administrative purposes.

D. Participating Physician Differential

Section 1848(h) of the Social Security Act, as enacted by Public Law 98–369 (the Deficit Reduction Act of 1984) defined a Medicare participating physician or supplier as one who agrees voluntarily to accept Medicare reimbursement as payment in full for all part B services. Over the years a number of incentives have been established in the law to encourage physicians and suppliers to participate and participation rates have increased as a result. One of the most important incentives is a higher payment for Medicare services performed. Currently, under the customary, prevailing, and reasonable rules implementing section 1848(b)(4)(A)(iv) of the Act, the nonparticipating physician reasonable charge for a service may not exceed 95 percent of the participating physician prevailing charge for a service.

Under the new physician fee schedule, in accordance with section 1848(a)(3) of the Act, this 95 percent policy will be continued. Nonparticipating physicians' allowed charges will be equal to only 95 percent of the full fee schedule amount (as noted in chapter VI, this 95 percent is the basis for the limiting charge to beneficiaries), while participating physician's allowed charges will be equal to the fee schedule amount. This participating physician differential must be taken into account in calculating the budget neutral conversion factor for 1992.

E. Health Manpower Shortage Area Bonus Payment

Another adjustment to be made to payments under the new physician fee schedule is the Health Manpower Shortage Area (HMSA) bonus, which was increased from 5 percent to 10 percent by section 1833(m) of the Act, as amended by section 6102(d) of OBRA 89, for services on or after January 1, 1991. In addition, the amendment broadened the applicability of the bonus to include all designated HMSAs, eliminating the restriction to class 1 and 2 areas under prior law. These manpower shortage areas, which are identified by the PHS pursuant to statutory guidelines, include both rural and urban areas, and bonus payments may be made in both rural and urban areas as of January 1, 1991. The bonus will be applied to payment amounts derived from the fee schedule, beginning in 1992.

F. Comparability Rule Under Fee Schedule

Under the Medicare part B customary, prevailing, and reasonable charge payment methodology currently in use, a statutory provision referred to as "comparability" authorizes adjustments to the payment amounts that would otherwise apply

Section 1842(b)(3)(B) of the Act provides that reasonable charge payments shall not be higher than the carriers' private business payments to their own policyholders and subscribers for comparable services under comparable circumstances. For a number of reasons, some carriers have found it difficult to enforce this provision vigorously. (One implication of this enforcement pattern is that 1991 expenditures for part B physicians' services will be higher than they would have been if enforcement had been more vigorous—an important point, since 1991 outlays are the base upon which fee schedule outlays will be computed.)

Chapter V—Implementation of the Fee Schedule and Standardized Payment Policies

The successful implementation of the Medicare Fee Schedule (MFS) and the uniform definitions required for payment policy standardization includes four principal elements:

(1) The preparation and issuance of clear instructions to carriers;

(2) Education and training of both providers and carriers;

(3) Carriers' calculation of payment amounts; and

(4) The validation of calculations and other carrier activities related to the fee schedule implementation.

These four elements have been integrated into an implementation schedule which will ensure that payments for physician services are made accurately and equitably on January 1, 1992, within the requirements of OBRA of 1989.

A. Schedule for Implementation

Wide variations in carrier payment policies exist largely as a result of the principle established in the original Medicare legislation under which carriers were allowed the discretion to implement policies and procedures appropriate for local circumstances. However, equitable implementation of the MFS depends on a payment system with uniform policies and procedures. Such policies should include standard definitions of services which are sufficiently clear to preclude variance in interpretation. Without this standardization, the actual work performed for a given service with a national relative value could vary widely among different localities, thus resulting in inequitable application of the fee schedule. It could also result in Medicare payments for services which are less comprehensive than intended. Therefore, HCFA has identified local carrier practices which must be modified or eliminated to establish a uniform fee schedule.

Some of the policies and practices which require such standardization strongly affect current payment algorithms, such as the global surgical definitions discussed in chapter III. Standardization is also required in carrier practices with little impact on payment algorithms. These include such data elements as the codes which designate the place or type of service.

Existing statutory and regulatory requirements and current carrier practices will be considered in the development of national definitions and policies. In the absence of legislative requirements or compelling policy rationale, the alternatives that are least disruptive to the physician community will be selected for nationwide implementation. Therefore, recognition of current carrier practices which affect a majority of providers and consultation with physician groups are important factors in the choice among standardization policy options.

To implement standardization, carriers will be required to make substantial changes to their claims processing and pricing systems, revise their local payment policy and billing manuals, train their staffs and conduct extensive provider education and training programs. The budget neutrality provisions of the legislation also require the development of a crosswalk between payment levels, based on the current coding and geographic conventions, and the corresponding payment levels under the uniform national policies.

In developing the schedule for implementation of uniform policies, several options were considered. One option was to implement all such policies on January 1, 1992, concurrent with the MFS. However, such changes would be impossible for carriers to implement accurately and for HCFA to

schedule amount. Neither the deductible nor the copayment apply to second opinions ordered by a PRO.

manage properly. Were multiple changes to be made simultaneously, their impact on the individual physician would be blurred, making it difficult to explain to physicians what to expect and maximizing uncertainty and confusion. It would be extremely difficult for HCFA and the carriers to determine whether implementation errors occurred and to locate and correct them.

The timetable for implementing the transition to the MFS is set by law. Payments under the transition rules must begin on January 1, 1992. To comply with the statute, the carriers will be engrossed in the calculation of the fee schedule amounts, new balance billing limits, transition payments and the participating physician enrollment process during the last 6 months of calendar year 1991. These activities will require computer programming and training of carrier and provider staffs, using the same resources that will be needed to implement the changes produced by standardization. The two activities cannot occur simultaneously without the risk of major operational problems. In addition, HCFA has moved over the last 2 years to place carriers into new systems which they share with other carriers. While this shared maintenance and shared processing approach is more cost-efficient, it demands greater efforts in coordination, planning and software releases. Therefore, to ensure a successful implementation of both, we propose the following schedule for standardizing payment policies and practices.

Standardization will be accomplished in four phases. Those issues which may be implemented solely by instruction to the carriers, such as the use of uniform codes for types and places of service, will be completed first. We plan for the first group of such issues to be implemented beginning January 1, 1991, with the 1991 reasonable charge update. The second group will be implemented beginning March 1, 1991 with the annual HCPCS update.

The final sets of standardized policies will be implemented only after the opportunity for public notice and comment including comment on the timing of any proposed early implementation. Certain of these issues, including the new global surgical definitions, and payment for minor surgeries and endoscopies, are scheduled for implementation on July 1, 1991. Others, such as new definitions of visits, payment for diagnostic tests and supplies with visits, and site of service differentials, will become effective on January 1, 1992.

Accurate and successful implementation is possible if these changes are made in such manageable increments. The proposed time frame will allow the attention to detail at the carriers necessary to minimize error. The approach will also contribute to physicians' understanding of the changes being made and allow them to anticipate and manage the impact on their office billing practices.

B. Instructions

Instructions are required to provide carriers with the payment policy and calculation information they need to implement the MFS and the uniform definitions. Claims processing instructions and billing requirements must also be issued to the carriers. To allow carriers sufficient time to work with the central maintainers to modify the claims processing systems and notify physicians of the new billing instructions, the issuance of required instructions should precede the date by which the instructions must be implemented by a minimum of 90 days.

Our current schedule for releasing instructions to the carriers is:

• October 1, 1990—Group I standardization issues scheduled for implementation beginning January 1, 1991

—Payment for specimen collection/handling fees
—Payment for injections
—Uniform specialty codes and designations for reporting purposes
—Site and type of service coding

• December 1, 1990—Group II standardization issues scheduled for implementation beginning March 1, 1991

—Coding for emergency room services
—Local modifiers

• April 1, 1991—Group III standardization issues scheduled for implementation beginning July 1, 1991:

—Global surgical packages
—Payment rules for minor surgeries and endoscopies
—Payment for travel and mileage

• September 1, 1991—Group IV standardization issues scheduled for implementation beginning January 1, 1992:

—Coding and payment rules for visits
—All other fee schedule issues

There will be ongoing consultation with the Medicare carriers, medical specialty societies and physician organizations such as the American Medical Association on these instructions.

C. Implementation at the Carriers

A number of discrete calculations must be performed before the payment amount for each service in each locality is obtained for 1992 and subsequent years. An approach that combines calculations by individual carriers with nationally developed data will utilize available resources in the most efficient manner and maximize the accuracy of the calculations. HCFA has used this approach with great success for handling Part A reimbursement.

If implementation of the national definition of a global surgical package occurs on July 1, 1991, it will require the repricing of customary and prevailing charges and MAAC billing limits for surgical procedures in most carrier jurisdictions. The amount of the adjustment at each carrier's site will be based on an analysis of historical data. For example, if the new global package includes 30 more days of postoperative care than the carrier's current policy, the historical data will be used to determine the average number of visits billed by all physicians for the surgical procedure within those additional 30 days that are now paid separately. The charges for the average number of additional visits would be added to the existing customary and prevailing charges to arrive at the new amounts; a similar adjustment would be made to balance billings limits.

The first calculation to be performed on a national basis for 1992 will be the computation of the average allowed charges for each service in each locality. These average allowances will be calculated across all physicians in all specialties. As described in chapter IV, in order to calculate payment amounts for those services on January 1, 1992, the average allowed charges must be compared to the MFS amounts to identify services subject to the transition rules for 1992–1995.

Standardization will also affect the average allowed charges for some procedures. The historical data used to calculate the average allowed charges may require adjustments to account for the new global surgical definition and other appropriate standard policies, using the same method employed to adjust customary and prevailing charges.

Because adjustments to the customary, prevailing and average allowed charges will be unique to each carrier, carriers will perform their own calculations. However, centrally developed information will be used to perform other functions. The first such software program will be known as the

carrier pricer. This program will calculate the MFS amounts, using the national conversion factor, the relative value units for the service by component, and the physician work, overhead, and malpractice geographic adjustment factors for the locality.

The MFS amounts determined by the pricer and the average allowed charges calculated by the carriers will be used by the second national software program, the transition amount calculator. This program will compare the average allowed charges to the MFS. If the average allowed charge is greater than 15 percent above or below the MFS amount, the program will calculate the appropriate blended payment amounts for 1992–1995. The transition charge limit calculator will determine each physician's charge limits under the new OBRA of 1989 rules.

Also, we will edit claims for compliance with the uniform payment policy. For example, carriers will analyze claims data to determine whether procedures included in a global surgical package have been billed for separately. If such fragmentation by physicians has occurred, carriers will rebundle the procedures.

D. Education and Training

Another important element in the implementation of the MFS and uniform policies is provider education and training. Compliance by the physician community affected by the changes and allaying of potential confusion caused by these reforms will be assured only if the carriers disseminate information timely. Standardization will result in changes in office billing procedures and require training of physicians' staffs or changes to their billing software. Because of the magnitude and complexity of the changes, HCFA believes that joint educational activities with professional medical and specialty associations would be effective in publicizing these changes. Furthermore, stringent professional education and training requirements have been established for the carriers.

Carrier staffs are being educated so that they can implement these changes and train physicians and physician staffs accurately and in advance of implementation. National conferences were held in January and July of 1990 to instruct HCFA Regional Offices and carrier staffs involved in claims processing, medical review, payment activities and provider relations. Attendees at these conferences received training on the MFS, MVPS, and beneficiary protection provisions, and directions on provider education. A third national conference will be held in May, 1991.

To provide the same information to their physician communities, carriers have initiated or increased their level of activities in all of the following areas:

- Preparing an annual Physician Payment Reform Provider Education and Training (PPR PET) Plan, detailing specific strategies for accomplishing their training goals;
- Establishing (or enhancing) speaker bureaus; actively seeking out opportunities to meet with physicians or medical societies or with beneficiary or lay groups; responding to requests for speakers for these groups;
- Setting up displays/demonstrations/booths at medical conventions, fairs, and the like, where participants can browse for pamphlets or other hand-out materials that provide information about payment reform;
- Publishing periodic newsletters or bulletins concerning all changes. Due to the magnitude of the changes, carriers will need to increase the frequency of these issuances. The language for many of these bulletins has been and will be prepared by HCFA to ensure uniformity in the information received by providers. Bulletins on the MVPS and mandatory physician/supplier submission of claims were published in early summer.
- Staffing with one or more persons to serve in an ombudsman capacity to troubleshoot for providers having difficulty with technical/billing issues or mechanisms of payment reform;
- Strengthening the link between carrier medical directors and physicians; and
- Formal briefing with State and local medical societies on each provision prior to implementation.

E. Validation of Carrier Implementation

The final element in the implementation of the MFS is the validation of carrier activities. HCFA Regional Offices will oversee the implementation by carriers, using stringent review protocols established by Central Office. These Regional Office reviews will look behind the methodology and verify the accuracy of all carrier-specific calculations, such as the recomputation of customary and prevailing charges to conform to the uniform definitions and the calculation of the adjusted historical payment amount. The Regional Offices will also review the carrier systems to ensure that the standard software packages have been installed correctly. Once installed, these packages will be tested to validate the resulting payment amounts.

Chapter VI—Improvements in Beneficiary Financial Protection

A. Limits on Balance Billing for Unassigned Claims

Section 1848(g) of the Act, as added by section 6102 of OBRA of 1989, contains a number of provisions of direct interest to Medicare beneficiaries. Most importantly, beneficiary protection from charges in excess of the Medicare allowed charge has been significantly increased under OBRA of 1989. The MAAC which now can differ by physician and service will be replaced by a new limiting charge, effective January 1991.

As the new rules phase in over the next several years, charges for unassigned claims will not exceed 125 percent of the nonparticipating prevailing charge in 1991, will not exceed 120 percent of the fee schedule payment to a nonparticipating physician in 1992, and will not exceed 115 percent of the fee schedule payment to a nonparticipating physician in 1993 and subsequent years. (During 1991 and 1992, balance billing is limited to the lower of (1) the percentage by which the prior year's MAAC exceeds the prior year's prevailing, or (2) the new percentage limit, i.e., 125 percent in 1991, 120 percent in 1992.)

Under the fee schedule nonparticipating physicians' services will continue to be paid 95 percent of the Medicare Part B payment that would be payable to a participating physician, i.e., 95 percent of the "full" fee schedule amount. Thus the limiting charge will be, for example, 109.25 percent (.95 × 115 percent) of the full fee schedule amount in 1993 and subsequent years.

B. Mandatory Physician Submission of Unassigned Claims

All physicians and suppliers are required to complete and submit claims at no charge to beneficiaries for Medicare covered services performed on or after September 1, 1990. Claims must be submitted within 1 year from the date of service. Payment for assigned claims not submitted within this time period will be reduced by 10 percent. Providers who repeatedly fail to submit unassigned claims may be subject to civil monetary penalties of up to $2,000. This provision is expected to reduce a substantial administrative burden for Medicare beneficiaries and it will result in faster, higher quality expenditure data for MVPS administration.

C. Mandatory Assignment for Claims from Qualified Medicare Beneficiaries

Sections 1902(a)(10)(E) and 1905(p) of the Social Security Act, as enacted by the Medicare Catastrophic Coverage Act of 1988 (Pub. L. 100–360), mandated that, effective April 1, 1990, States pay Medicare cost-sharing expenses for part B enrollees with incomes below the Federal poverty line who would not otherwise be eligible for Medicaid (so-called "qualified Medicare beneficiaries" or QMBs). Under this provision, States are required to pay the Medicare deductible, premium, and coinsurance for QMBs who apply for this benefit. Federal matching funds are provided to States for this purpose on the same basis as for other Medicaid expenditures. Although Medicare/Medicaid dual eligibles had been protected from balance billing under prior law, the new catastrophic legislation did not clearly prohibit balance billing for the newly defined "QMB" group. Section 1848(g)(3) of the Act as added by OBRA of 1989 resolved this ambiguity by making clear that QMBs are protected from balance billing as well as all other potential sources of out-of-pocket costs for Medicare services.

D. Monitoring of Charges, Utilization, and Access

In addition, section 1848(g)(6) requires the Secretary of HHS to monitor charges by nonparticipating physicians and changes in the proportion of expenditures attributable to services provided by participating physicians on an assigned basis. The Secretary must develop and submit to Congress recommendations to address any significant decreases in these assignment and participation rates. Section 1848(g)(7) also requires the Secretary to monitor changes in utilization and beneficiary access to services, possible sources of inappropriate utilization, and factors influencing these trends. The Secretary must provide both of these monitoring reports to Congress by April 15 each year, beginning in 1991 for utilization and access and 1992 for charges.

Addendum A—Technical Documentation/Explanation and Guide to Use of Model Fee Schedule Tables

As explained in chapter II, OBRA of 1989 provides that fee schedule payment amounts are the product of three elements—a relative value for the service, a geographic adjustment factor for the locality, and a nationally uniform dollar conversion factor. The law also provides for, in effect, separate adjustment of the work, overhead and malpractice components of the total RVUs by a geographic adjustment factor appropriate to that component. (As explained in chapter II, GPCI values are used to fulfill the statutory requirement for geographic adjustment factors.) Thus we have developed this working formula for computing a payment amount for a procedure in a locality:

Payment = [(RVUw × GPCIw) + (RVUoh × GPCIoh) + (RVUm × GPCIm)] × CF

where

RVUw = physician work relative value units for the service

RVUoh = overhead relative value units for the service

RVUm = malpractice relative value units for the service

GPCIw = geographic practice cost index value for physician work applicable in the locality [1]

GPCIoh = geographic practice cost index value for overhead applicable in the locality

GPCIm = geographic practice cost index value for malpractice applicable in the locality

CF = uniform national conversion factor

To compute a payment amount for a specific service in a particular locality using the preliminary estimates computed for this model fee schedule, use the listing of HCPCS codes in Addendum B to locate that service. Then make a note of the RVUs for work, overhead, and malpractice for that service. Next use Addendum C to obtain work, overhead and malpractice geographic practice cost index values for the particular locality. Finally, use $1.00 [2] as the uniform national conversion factor. Combining the elements as specified in the formula above will yield an estimated payment amount.

For example, to compute the payment amount for skin biopsy (HCPCS code 11100) in Birmingham, Alabama, first locate HCPCS code 11100 in Addendum B. Note that the RVUs for work, overhead, and malpractice are as follows:

Work RVU (RVUw) = 25.5
Overhead RVU (RVUoh) = 17.8
Malpractice RVU (RVUm) = 1.0

Next, locate Birmingham in Addendum C. Note that the GPCI values for work, overhead, and malpractice are as follows:

Work GPCI (GPCIw) = 0.981
Overhead GPCI (GPCIoh) = 0.913
Malpractice GPCI (GPCIm) = 0.826

Finally, using $1.00 as the uniform national conversion factor, place the values into the given formula and compute:

Payment = [(RVUw × GPCIw) + (RVUoh × GPCIoh) + (RVUm × GPCIm)] × CF
Payment = [(25.5 × 0.981) + (17.8 × 0.913) + (1.0 × 0.826)] × $1
Payment = [25.0155 + 16.2514 + 0.826] × $1
Payment = [42.0929] × $1
Payment = $42.09

Addendum B—Relative Value Units by Service

BILLING CODE 4120-03-M

[1] This value reflects only one-fourth of the variation in physician work, as required by OBRA of 1989.

[2] The relative values in Addendun B were computed using a method to produce a conversion factor of $1.00. (See chapter II for a discussion of the methodology.) However, while the $1.00 conversion factor is not arbitrary, like both the relative values in Addendum B and the GPCIs in Addendum C, it is preliminary, for the following reasons:

- Neither the relative values nor the $1.00 conversion factor account for payment changes since 1988.
- Only about 1400 services were used to compute this conversion factor, and Harvard is resurveying many of these services.
- A number of policy decisions (e.g., global surgical fees and visit coding) will affect the relative values and the estimated distribution of services.
- We may need to adjust the data and conversion factor to preserve budget neutrality.
- Anesthesia relative values were excluded because time unit data were not readily available.

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
11100	BIOPSY OF LESION		25.5	17.8	1.0	44.3
11101	BIOPSY, EACH ADDED LESION		15.6	10.2	0.5	26.3
11200	REMOVAL OF SKIN TAGS		17.8	14.2	1.1	33.1
11201	REMOVAL OF ADDED SKIN TAGS		13.7	6.0	0.4	20.1
11400	REMOVAL OF SKIN LESION		21.1	15.5	1.4	38.0
11401	REMOVAL OF SKIN LESION		24.4	19.5	1.7	45.6
11402	REMOVAL OF SKIN LESION		32.9	26.1	2.8	61.8
11403	REMOVAL OF SKIN LESION		45.0	35.8	5.1	85.9
11404	REMOVAL OF SKIN LESION		62.5	45.2	7.5	115.2
11406	REMOVAL OF SKIN LESION		91.7	62.4	12.6	166.7
11420	REMOVAL OF SKIN LESION		21.9	16.2	1.5	39.6
11421	REMOVAL OF SKIN LESION		27.4	21.2	1.9	50.5
11422	REMOVAL OF SKIN LESION		37.6	28.8	3.1	69.5
11423	REMOVAL OF SKIN LESION		51.0	40.8	5.7	97.5
11424	REMOVAL OF SKIN LESION		69.1	47.2	7.4	123.7
11426	REMOVAL OF SKIN LESION		92.6	60.9	11.4	164.9
11440	REMOVAL OF SKIN LESION		25.5	20.9	1.7	48.1
11441	REMOVAL OF SKIN LESION		30.4	26.2	2.1	58.7
11442	REMOVAL OF SKIN LESION		40.9	32.8	2.9	76.6
11443	REMOVAL OF SKIN LESION		60.3	44.1	4.6	109.0
11444	REMOVAL OF SKIN LESION		73.9	49.1	5.1	128.1
11446	REMOVAL OF SKIN LESION		89.0	58.0	7.7	154.7
11450	REMOVAL, SWEAT GLAND LESION		114.7	65.8	12.1	192.6
11451	REMOVAL, SWEAT GLAND LESION		176.5	66.7	9.0	252.2
11462	REMOVAL, SWEAT GLAND LESION		104.4	64.1	10.0	178.5
11463	REMOVAL, SWEAT GLAND LESION		122.2	111.6	18.0	251.8
11470	REMOVAL, SWEAT GLAND LESION		110.4	61.6	11.3	183.3
11471	REMOVAL, SWEAT GLAND LESION		146.6	98.2	16.7	261.5
11600	REMOVAL OF SKIN LESION		42.5	35.4	2.8	80.7
11601	REMOVAL OF SKIN LESION		45.0	43.0	3.1	91.1
11602	REMOVAL OF SKIN LESION		64.0	56.6	4.5	125.1
11603	REMOVAL OF SKIN LESION		78.7	70.2	7.3	156.2
11604	REMOVAL OF SKIN LESION		95.6	80.6	10.3	186.5
11606	REMOVAL OF SKIN LESION		138.8	103.5	18.5	260.8
11620	REMOVAL OF SKIN LESION		42.6	40.9	3.3	87.0
11621	REMOVAL OF SKIN LESION		51.6	54.5	4.0	110.1
11622	REMOVAL OF SKIN LESION		72.7	70.3	5.9	148.9
11623	REMOVAL OF SKIN LESION		87.8	79.8	8.7	176.3
11624	REMOVAL OF SKIN LESION		94.4	99.1	12.6	206.1
11626	REMOVAL OF SKIN LESION		149.0	114.4	17.7	281.1
11640	REMOVAL OF SKIN LESION		51.8	53.2	3.9	108.9
11641	REMOVAL OF SKIN LESION		68.8	67.6	4.8	141.2
11642	REMOVAL OF SKIN LESION		85.4	84.2	6.7	176.3
11643	REMOVAL OF SKIN LESION		105.3	96.2	9.3	210.8
11644	REMOVAL OF SKIN LESION		129.7	112.1	11.6	253.4
11646	REMOVAL OF SKIN LESION		141.5	137.2	17.9	296.6
11900	INJECTION INTO SKIN LESIONS		12.3	7.9	0.4	20.6
11901	ADDED SKIN LESION INJECTIONS		20.3	13.0	0.6	33.9
11950	THERAPY FOR CONTOUR DEFECTS		62.5	24.2	1.9	88.6
11951	THERAPY FOR CONTOUR DEFECTS		87.2	22.8	1.7	111.7
11954	THERAPY FOR CONTOUR DEFECTS		37.0	15.7	3.7	56.4
12001	REPAIR SUPERFICIAL WOUND(S)		24.4	17.0	1.7	43.1
12002	REPAIR SUPERFICIAL WOUND(S)		33.2	23.3	2.4	58.9
12004	REPAIR SUPERFICIAL WOUND(S)		43.3	32.4	3.6	79.3
12011	REPAIR SUPERFICIAL WOUND(S)		32.6	20.7	2.1	55.4

1/ Values may change prior to implementation, as discussed on pp. 3-5. Also, HCPCS codes shown are from the 1956 version of HCPCS

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
12013	REPAIR SUPERFICIAL WOUND(S)		41.7	28.1	2.9	72.7
19100	BIOPSY OF BREAST		34.8	22.9	4.9	62.6
19101	BIOPSY OF BREAST		103.2	84.7	20.4	208.3
19120	REMOVAL OF BREAST LESION		128.8	107.5	27.0	263.3
19140	REMOVAL OF BREAST TISSUE		205.5	164.8	41.6	411.9
19160	REMOVAL OF BREAST TISSUE		175.6	137.8	35.0	348.4
19162	REMOVE BREAST TISSUE, NODES		378.7	361.3	91.9	831.9
19180	REMOVAL OF BREAST		251.9	209.8	52.8	514.5
19182	REMOVAL OF BREAST TISSUE		395.5	224.8	56.0	676.3
19200	EXTENSIVE BREAST SURGERY		415.5	421.7	106.1	943.3
19220	EXTENSIVE BREAST SURGERY		470.4	423.5	105.0	998.9
19240	EXTENSIVE BREAST SURGERY		416.1	390.7	99.5	906.3
20500	INJECTION OF SINUS TRACT		18.7	10.4	1.2	30.3
20501	INJECT SINUS TRACT FOR X-RAY		35.1	13.0	1.6	49.7
20520	REMOVAL OF FOREIGN BODY		48.8	23.5	3.4	75.7
20525	REMOVAL OF FOREIGN BODY		172.3	71.6	13.7	257.6
20550	INJECTION TREATMENT		19.2	10.9	1.4	31.5
20600	DRAINAGE JOINT/BURSA/CYST		26.3	11.7	1.4	39.4
20605	DRAINAGE JOINT/BURSA/CYST		25.8	13.0	1.7	40.5
20610	INJECT/DRAIN JOINT/BURSA		25.5	13.5	1.8	40.8
20615	TREATMENT OF BONE CYST		29.1	17.5	2.3	48.9
21200	RECONSTRUCT LOWER JAW BONE		647.2	375.9	61.1	1084.2
21202	RECONSTRUCT LOWER JAW BONE		525.9	443.2	77.9	1047.0
21203	RECONSTRUCT LOWER JAW BONE		635.1	445.6	85.0	1165.7
21204	RECONSTRUCT UPPER JAW BONE		672.2	694.2	134.3	1500.7
21206	RECONSTRUCT UPPER JAW BONE		540.7	397.5	73.7	1011.9
21230	RIB CARTILAGE GRAFT		279.7	331.5	55.6	666.8
21235	EAR CARTILAGE GRAFT		235.3	185.6	26.1	447.0
21242	RECONSTRUCTION OF JAW JOINT		502.1	520.2	89.4	1111.7
21310	TREATMENT OF NOSE FRACTURE		25.5	31.9	3.8	61.2
21315	TREATMENT OF NOSE FRACTURE		70.0	51.7	8.0	129.7
21320	TREATMENT OF NOSE FRACTURE		95.6	89.1	14.8	199.5
21325	REPAIR OF NOSE FRACTURE		174.1	120.3	20.0	314.4
21330	REPAIR OF NOSE FRACTURE		256.2	196.6	32.4	485.2
21335	REPAIR OF NOSE FRACTURE		440.5	427.1	70.7	938.3
21337	REPAIR NASAL SEPTAL FRACTURE		111.0	90.8	14.5	216.3
21360	REPAIR CHEEK BONE FRACTURE		322.5	211.9	34.8	569.2
21365	REPAIR CHEEK BONE FRACTURE		528.6	363.5	61.4	953.5
21385	REPAIR EYE SOCKET FRACTURE		431.2	290.8	44.3	766.3
21386	REPAIR EYE SOCKET FRACTURE		467.1	315.4	47.4	829.9
21390	REPAIR EYE SOCKET FRACTURE		554.0	406.5	49.3	1009.8
21421	TREAT MOUTH ROOF FRACTURE		275.2	130.0	22.5	427.7
21440	REPAIR DENTAL RIDGE FRACTURE		140.6	133.6	20.2	294.4
21450	TREAT LOWER JAW FRACTURE		157.5	97.7	15.0	270.2
21451	TREAT LOWER JAW FRACTURE		252.5	176.9	26.5	455.9
21454	TREAT LOWER JAW FRACTURE		357.5	184.2	24.0	565.7
21455	REPAIR LOWER JAW FRACTURE		265.5	229.9	39.0	534.4
21461	REPAIR LOWER JAW FRACTURE		359.9	330.1	57.1	747.1
21462	REPAIR LOWER JAW FRACTURE		414.9	356.5	64.5	835.9
21470	REPAIR LOWER JAW FRACTURE		544.3	469.4	81.5	1095.2
21480	RESET DISLOCATED JAW		36.5	30.5	3.5	70.5
21485	RESET DISLOCATED JAW		91.7	64.1	9.1	164.9
24640	TREAT ELBOW DISLOCATION		17.6	24.2	2.3	44.1
27125	REVISE HIP WITH PROSTHESIS		476.4	738.4	134.1	1348.9
27126	REVISE HIP WITH PROSTHESIS		488.8	761.6	138.0	1388.4
27127	REVISE HIP WITH PROSTHESIS		563.0	946.2	171.8	1681.0
27130	TOTAL HIP REPLACEMENT, SIMPLE		713.0	1244.1	225.0	2182.1
27131	TOTAL HIP REPLACEMENT, COMPLEX		824.3	1218.9	221.0	2264.2
27135	TOTAL HIP REPLACEMENT, REVISION		827.6	1337.3	242.7	2407.6
27170	REPAIR/GRAFT FEMUR HEAD/NECK		412.1	605.0	109.4	1126.5

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
27175	TREAT SLIPPED EPIPHYSIS		40.9	36.4	6.6	83.9
27176	TREAT SLIPPED EPIPHYSIS		351.2	557.6	98.0	1006.8
27177	REPAIR SLIPPED EPIPHYSIS		394.6	527.9	98.7	1021.2
27190	TREATMENT OF SACRUM FRACTURE		74.2	73.5	12.2	159.9
27196	TREAT PELVIS DISLOCATION		63.4	44.0	4.7	112.1
27200	TREAT TAIL BONE FRACTURE		31.0	48.2	6.8	86.0
27210	TREAT PELVIS FRACTURE		114.7	142.3	24.9	281.9
27211	TREAT PELVIS FRACTURE		172.6	213.6	38.7	424.9
27214	REPAIR PELVIS FRACTURE(S)		422.4	410.4	73.4	906.2
27220	TREAT HIP SOCKET FRACTURE		139.7	127.7	22.4	289.8
27222	TREAT HIP SOCKET FRACTURE		225.1	187.3	33.4	445.8
27225	REPAIR HIP SOCKET FRACTURE		868.6	705.2	120.6	1694.4
27230	TREAT FRACTURE OF FEMUR		123.4	121.5	18.9	263.8
27232	TREAT FRACTURE OF FEMUR		239.0	278.7	50.2	567.9
27234	REPAIR FRACTURE OF FEMUR		724.4	647.1	116.4	1487.9
27235	REPAIR OF FEMUR FRACTURE		495.7	599.2	108.6	1203.5
27236	REPAIR OF FEMUR FRACTURE		518.3	626.8	114.4	1259.5
27238	TREATMENT OF FEMUR FRACTURE		205.8	153.3	25.3	384.4
27240	TREATMENT OF FEMUR FRACTURE		324.9	315.4	57.3	697.6
27242	REPAIR OF FEMUR FRACTURE		541.0	445.3	80.7	1067.0
27244	REPAIR OF FEMUR FRACTURE		515.9	603.6	109.8	1229.3
27246	TREATMENT OF FEMUR FRACTURE		121.3	146.6	26.3	294.2
27248	REPAIR OF FEMUR FRACTURE		436.6	409.6	74.4	920.6
27250	TREAT HIP DISLOCATION		127.0	107.7	18.3	253.0
27252	TREAT HIP DISLOCATION		157.2	153.5	27.7	338.4
27253	REPAIR OF HIP DISLOCATION		349.4	466.4	84.5	900.3
27256	TREATMENT OF HIP DISLOCATION		146.6	56.9	10.3	213.8
28200	REPAIR OF FOOT TENDON		93.8	120.8	21.2	235.8
28208	REPAIR OF FOOT TENDON		61.6	83.4	14.9	159.9
28220	RELEASE OF FOOT TENDON		52.7	89.4	17.5	159.6
28225	RELEASE OF FOOT TENDON		43.1	59.8	11.2	114.1
28230	INCISION OF FOOT TENDON(S)		51.0	56.2	10.1	117.3
28232	INCISION OF TOE TENDON		34.8	35.9	6.5	77.2
28238	REVISION OF FOOT TENDON		138.2	238.5	43.0	419.7
28240	RELEASE OF BIG TOE		60.6	69.4	12.5	142.5
28250	REVISION OF FOOT FASCIA		87.8	133.6	23.8	245.2
28260	RELEASE OF MIDFOOT JOINT		114.7	132.5	22.7	269.9
28261	REVISION OF FOOT TENDON		114.7	207.6	37.5	359.8
28262	REVISION OF FOOT AND ANKLE		255.3	209.8	37.0	502.1
28270	RELEASE OF FOOT CONTRACTURE		47.2	64.2	11.5	122.9
28272	RELEASE OF TOE JOINT, EACH		40.0	50.8	9.2	100.0
28280	FUSION OF TOES		47.5	59.7	9.9	117.1
28285	REVISION OF HAMMERTOE		82.1	98.8	17.9	198.8
28286	REVISION OF HAMMERTOE		89.0	122.1	22.2	233.3
28288	PARTIAL REMOVAL OF FOOT BONE		78.4	94.7	17.3	190.4
28290	CORRECTION OF BUNION		125.2	175.6	31.6	332.4
28292	CORRECTION OF BUNION		156.6	252.3	45.9	454.8
28293	CORRECTION OF BUNION		173.8	286.3	51.6	511.7
28294	CORRECTION OF BUNION		163.1	271.5	47.6	502.2
28296	CORRECTION OF BUNION		188.0	312.9	56.6	557.5
28298	CORRECTION OF BUNION		149.7	230.6	42.0	422.3
28300	INCISION OF HEEL BONE		143.3	210.4	39.8	393.5
28304	INCISION OF MIDFOOT BONES		126.4	192.7	34.8	353.9
28306	INCISION OF METATARSAL		108.3	172.9	31.3	312.5
28308	INCISION OF METATARSAL		101.4	156.9	28.4	286.7
28309	INCISION OF METATARSALS		141.5	240.6	43.0	425.1
28310	REVISION OF BIG TOE		74.5	108.7	19.7	202.9
28312	REVISION OF TOE		78.1	93.5	17.2	188.8
28315	REMOVAL OF SESAMOID BONE		83.6	113.2	20.6	217.4
28322	REPAIR OF METATARSALS		110.7	176.0	31.5	318.2

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
29815	SHOULDER ARTHROSCOPY		99.9	138.9	24.6	263.4
29819	SHOULDER ARTHROSCOPY/SURGERY		189.2	316.9	57.8	563.9
29820	SHOULDER ARTHROSCOPY/SURGERY		202.5	282.3	51.1	535.9
29822	SHOULDER ARTHROSCOPY/SURGERY		202.1	378.6	68.5	649.2
29823	SHOULDER ARTHROSCOPY/SURGERY		212.7	475.1	86.0	773.8
29870	KNEE ARTHROSCOPY		81.5	141.9	25.6	249.0
29871	KNEE ARTHROSCOPY/DRAINAGE		132.2	259.8	46.2	438.2
29872	KNEE ARTHROSCOPY/INFECTION		133.4	286.0	50.4	469.8
29874	KNEE ARTHROSCOPY/SURGERY		185.6	360.8	64.9	611.3
29875	KNEE ARTHROSCOPY/SURGERY		199.7	316.0	57.1	572.8
29876	KNEE ARTHROSCOPY/SURGERY		212.1	454.4	81.9	748.4
29877	KNEE ARTHROSCOPY/SURGERY		187.1	419.6	75.9	682.6
29879	KNEE ARTHROSCOPY/SURGERY		222.4	529.7	95.6	847.7
29881	KNEE ARTHROSCOPY/SURGERY		222.4	519.3	93.9	835.6
29882	KNEE ARTHROSCOPY/SURGERY		203.4	478.2	86.5	768.1
29887	KNEE ARTHROSCOPY/SURGERY		206.7	362.2	64.9	633.8
29890	ANKLE ARTHROSCOPY/SURGERY		115.0	169.6	30.7	315.3
29894	ANKLE ARTHROSCOPY/SURGERY		193.1	391.9	71.0	656.0
29895	ANKLE ARTHROSCOPY/SURGERY		188.9	362.4	66.0	617.3
29897	ANKLE ARTHROSCOPY/SURGERY		118.0	269.4	43.4	430.8
30400	RECONSTRUCTION OF NOSE		260.1	244.9	37.4	542.4
30410	RECONSTRUCTION OF NOSE		335.5	446.2	74.2	855.9
30420	RECONSTRUCTION OF NOSE		394.3	549.5	92.6	1036.4
30430	REVISION OF NOSE		139.1	72.4	11.1	222.6
30500	RESECTION OF NASAL SEPTUM		262.5	214.4	34.7	511.6
30520	REPAIR OF NASAL SEPTUM		223.0	280.5	46.5	550.0
30560	RELEASE OF NASAL ADHESIONS		31.3	16.3	2.7	50.3
30580	REPAIR UPPER JAW FISTULA		80.0	192.8	32.2	305.0
30600	REPAIR MOUTH/NOSE FISTULA		95.0	82.4	11.2	188.6
30620	RECONSTRUCTION INNER NOSE		277.0	314.3	51.8	643.1
30630	REPAIR NASAL SEPTUM DEFECT		180.1	194.4	31.8	406.3
31000	IRRIGATION MAXILLARY SINUS		11.2	14.4	2.3	27.9
31001	IRRIGATION MAXILLARY SINUS		14.8	20.2	3.2	38.2
31002	IRRIGATION SPHENOID SINUS		14.3	12.2	2.0	28.5
31020	EXPLORATION MAXILLARY SINUS		65.8	72.6	12.0	150.4
31021	EXPLORATION MAXILLARY SINUS		96.2	105.0	17.3	218.5
31030	EXPLORATION MAXILLARY SINUS		197.9	304.7	50.5	553.1
31031	EXPLORATION MAXILLARY SINUS		282.7	448.6	74.3	805.6
31032	EXPLORE SINUS,REMOVE POLYPS		215.1	312.9	51.5	579.5
31033	EXPLORE SINUS,REMOVE POLYPS		306.2	407.8	67.1	781.1
31050	EXPLORATION SPHENOID SINUS		186.8	163.7	27.2	377.7
31070	EXPLORATION OF FRONTAL SINUS		143.9	129.1	21.4	294.4
31075	EXPLORATION OF FRONTAL SINUS		214.8	282.2	46.2	543.2
31090	EXPLORATION OF SINUSES		427.5	660.5	109.8	1197.8
31300	REMOVAL OF LARYNX LESION		258.3	349.3	58.6	666.2
31360	REMOVAL OF LARYNX		604.0	690.8	117.5	1412.3
31365	REMOVAL OF LARYNX		822.5	981.4	167.8	1971.7
31368	PARTIAL REMOVAL OF LARYNX		846.3	990.4	166.5	2003.2
31370	PARTIAL REMOVAL OF LARYNX		396.5	622.9	104.5	1123.9
31400	REVISION OF LARYNX		135.8	363.4	60.3	559.5
31500	INSERTION OF WINDPIPE AIRWAY		61.9	35.2	3.4	100.5
31505	DIAGNOSTIC LARYNGOSCOPY		12.3	13.5	2.0	27.8
31510	LARYNGOSCOPY WITH BIOPSY		52.7	27.7	4.6	85.0
31511	REMOVE FOREIGN BODY, LARYNX		34.3	23.1	3.5	60.9
31512	REMOVAL OF LARYNX LESION		152.7	111.7	19.4	283.8
31515	LARYNGOSCOPY FOR ASPIRATION		49.1	37.5	6.0	92.6
31520	DIAGNOSTIC LARYNGOSCOPY		50.2	68.7	11.5	130.4
31525	DIAGNOSTIC LARYNGOSCOPY		69.1	61.9	9.9	140.9
31526	DIAGNOSTIC LARYNGOSCOPY		118.3	107.3	17.7	243.3
31527	LARYNGOSCOPY FOR TREATMENT		70.0	100.1	15.3	185.4

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
31528	LARYNGOSCOPY AND DILATATION		75.1	62.1	13.0	170.2
31530	OPERATIVE LARYNGOSCOPY		130.6	120.6	19.4	270.6
31531	OPERATIVE LARYNGOSCOPY		178.6	162.8	27.6	369.0
31535	OPERATIVE LARYNGOSCOPY		135.2	127.6	21.6	284.4
31536	OPERATIVE LARYNGOSCOPY		170.2	175.8	29.4	375.4
31540	OPERATIVE LARYNGOSCOPY		184.7	182.5	30.5	397.7
31541	OPERATIVE LARYNGOSCOPY		209.4	225.1	37.4	471.9
31561	OPERATIVE LARYNGOSCOPY		248.6	346.1	57.8	652.5
31570	LARYNGOSCOPY WITH INJECTION		175.3	178.3	29.6	383.2
31571	LARYNGOSCOPY WITH INJECTION		191.9	196.2	32.6	420.7
31575	FIBERSCOPIC LARYNGOSCOPY		45.3	49.4	8.1	102.8
31576	FIBERSCOPIC LARYNGOSCOPY		116.8	103.1	17.8	237.7
31578	FIBERSCOPIC LARYNGOSCOPY		216.6	152.8	26.2	395.6
31600	INCISION OF WINDPIPE		105.9	131.5	30.2	267.6
31601	INCISION OF WINDPIPE		125.5	138.3	27.5	291.3
31603	INCISION OF WINDPIPE		117.1	138.6	30.9	286.6
31605	INCISION OF NECK CARTILAGES		102.0	118.3	23.6	243.9
31610	INCISION OF WINDPIPE		161.7	211.6	43.0	416.3
31612	PUNCTURE/CLEAR WINDPIPE		29.3	28.6	4.9	62.8
31613	REPAIR WINDPIPE OPENING		67.0	75.7	14.5	157.2
31614	REPAIR WINDPIPE OPENING		150.6	196.0	34.6	381.2
31615	VISUALIZATION OF WINDPIPE		103.5	51.2	8.7	163.4
31620	BRONCHOSCOPY		129.1	82.5	18.9	230.5
31621	BRONCHOSCOPY		127.9	105.0	15.6	248.5
31625	BRONCHOSCOPY WITH BIOPSY		142.7	123.7	21.2	287.6
31626	BRONCHOSCOPY WITH BIOPSY		160.5	129.6	19.7	309.8
31627	BRONCHOSCOPY WITH BIOPSY		148.7	120.9	21.6	291.2
31628	BRONCHOSCOPY WITH BIOPSY		165.6	162.5	18.5	346.6
31630	BRONCHOSCOPY WITH REPAIR		195.8	111.2	21.0	328.0
31635	REMOVE FOREIGN BODY, AIRWAY		178.6	137.6	28.8	345.0
31640	BRONCHOSCOPY & REMOVE LESION		256.5	140.0	33.4	429.9
31645	BRONCHOSCOPY, CLEAR AIRWAYS		129.1	103.6	16.7	249.4
31646	BRONCHOSCOPY,RECLEAR AIRWAYS		108.9	77.4	13.4	199.7
31650	BRONCHOSCOPY, DRAINAGE		148.1	60.5	7.4	216.0
31656	BRONCHOSCOPY,INJECT FOR XRAY		112.2	96.1	17.2	225.5
32000	DRAINAGE OF CHEST		97.8	26.8	3.5	128.1
32005	TREAT LUNG LINING CHEMICALLY		67.0	35.8	8.6	111.4
32020	TREATMENT OF COLLAPSED LUNG		108.3	75.6	19.4	203.3
32035	EXPLORATION OF CHEST		297.2	199.5	57.7	554.4
32036	EXPLORATION OF CHEST		302.6	199.9	59.5	562.0
32095	BIOPSY THROUGH CHEST WALL		305.6	245.6	66.7	617.9
32100	EXPLORATION/BIOPSY OF CHEST		469.5	338.2	99.2	906.9
32110	EXPLORE/REPAIR CHEST		452.3	313.7	89.0	855.0
32120	RE-EXPLORATION OF CHEST		424.8	276.9	84.8	786.5
32140	REMOVAL OF LUNG LESION(S)		630.9	390.8	115.8	1137.5
32141	REMOVE/TREAT LUNG LESIONS		578.1	403.4	119.3	1100.8
32150	REMOVAL OF LUNG LESION(S)		451.7	234.2	56.9	742.8
32160	OPEN CHEST HEART MASSAGE		391.9	260.0	62.4	714.3
32220	RELEASE OF LUNG		671.3	446.7	135.1	1253.1
32310	REMOVAL OF CHEST LINING		528.6	338.1	102.3	969.0
32320	FREE/REMOVE CHEST LINING		683.1	535.3	162.2	1380.6
32400	NEEDLE BIOPSY CHEST LINING		48.3	44.9	5.6	98.8
32402	OPEN BIOPSY CHEST LINING		259.5	198.4	59.0	516.9
32440	REMOVAL OF LUNG		724.7	627.8	188.3	1540.8
32480	PARTIAL REMOVAL OF LUNG		671.9	579.2	174.4	1425.5
32485	PARTIAL REMOVAL OF LUNG		799.2	619.3	190.0	1608.5
32490	PARTIAL REMOVAL OF LUNG		776.3	650.3	196.6	1623.2
32500	PARTIAL REMOVAL OF LUNG		529.2	430.0	129.7	1088.9
32520	REMOVE LUNG & REVISE CHEST		760.0	629.0	189.0	1578.0
33010	DRAINAGE OF HEART SAC		136.7	48.4	7.2	192.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
33011	REPEAT DRAINAGE OF HEART SAC		108.6	33.4	6.0	148.0
33015	INCISION OF HEART SAC		355.1	123.1	33.9	512.1
33206	INSERTION OF HEART PACEMAKER		185.6	379.2	101.4	666.2
33207	INSERTION OF HEART PACEMAKER		194.0	398.7	107.6	700.3
33208	INSERTION OF HEART PACEMAKER		245.9	490.2	132.9	869.0
33210	INSERTION OF HEART ELECTRODE		54.0	136.9	16.3	207.2
33212	INSERTION OF PULSE GENERATOR		111.6	205.5	58.0	375.1
33216	REVISION IMPLANTED ELECTRODE		102.0	191.1	47.3	340.4
33218	REPAIR PACEMAKER ELECTRODES		89.0	151.7	42.2	282.9
33219	REPAIR OF PACEMAKER		104.4	209.6	58.4	372.4
33232	REMOVAL OF PACEMAKER		84.2	123.6	35.7	243.5
33405	REPLACEMENT OF AORTIC VALVE		889.2	933.6	297.0	2119.8
33510	CORONARY ARTERY BYPASS		682.8	907.6	287.6	1878.0
33511	CORONARY ARTERIES BYPASS		832.4	1215.5	385.3	2433.2
33512	CORONARY ARTERIES BYPASS		898.5	1352.1	428.4	2679.0
33513	CORONARY ARTERIES BYPASS		973.6	1443.1	457.7	2874.4
33514	CORONARY ARTERIES BYPASS		1007.4	1495.5	476.5	2979.4
33641	REPAIR HEART SEPTUM DEFECT		704.2	652.4	189.2	1545.8
33681	REPAIR HEART SEPTUM DEFECT		775.1	665.3	209.6	1650.0
33682	REPAIR HEART SEPTUM DEFECT		850.5	748.3	237.9	1836.7
35001	REPAIR DEFECT OF ARTERY		566.9	535.5	149.4	1251.8
35011	REPAIR DEFECT OF ARTERY		504.5	468.5	125.1	1098.1
35081	REPAIR DEFECT OF ARTERY		803.2	831.4	233.0	1867.6
35082	REPAIR ARTERY RUPTURE, AORTA		878.6	970.0	267.9	2116.5
35091	REPAIR DEFECT OF ARTERY		912.7	876.8	242.1	2031.6
35092	REPAIR ARTERY RUPTURE, BELLY		968.2	978.3	271.2	2217.7
35102	REPAIR DEFECT OF ARTERY		874.1	860.5	238.0	1972.6
35103	REPAIR ARTERY RUPTURE, GROIN		935.9	1035.3	278.1	2249.3
35121	REPAIR DEFECT OF ARTERY		685.8	611.5	168.0	1465.3
35131	REPAIR DEFECT OF ARTERY		655.0	489.7	136.9	1281.6
35141	REPAIR DEFECT OF ARTERY		560.6	509.2	142.9	1212.7
35142	REPAIR ARTERY RUPTURE, THIGH		617.3	594.8	165.9	1378.0
35151	REPAIR DEFECT OF ARTERY		608.0	538.4	149.0	1295.4
35161	REPAIR DEFECT OF ARTERY		423.0	439.7	118.4	981.1
35301	RECHANNELING OF ARTERY		458.3	594.9	165.5	1218.7
35311	RECHANNELING OF ARTERY		631.2	650.8	185.7	1467.7
35321	RECHANNELING OF ARTERY		370.2	431.8	112.9	914.9
35331	RECHANNELING OF ARTERY		527.1	433.9	124.0	1085.0
35341	RECHANNELING OF ARTERY		502.7	493.3	137.8	1133.8
35351,	RECHANNELING OF ARTERY		442.6	507.6	138.8	1089.0
35361	RECHANNELING OF ARTERY		529.8	602.6	168.1	1300.5
35371	RECHANNELING OF ARTERY		377.8	396.9	110.6	885.3
35381	RECHANNELING OF ARTERY		435.4	453.6	125.0	1014.0
39400	VISUALIZATION OF MEDIASTINUM		201.2	159.2	48.3	408.7
42145	REPAIR,PALATE,PHARYNX/UVULA		247.7	425.9	71.5	745.1
42400	BIOPSY OF SALIVARY GLAND		38.1	23.5	4.3	65.9
42405	BIOPSY OF SALIVARY GLAND		70.6	48.3	8.9	127.8
42408	EXCISION OF SALIVARY CYST		100.8	83.9	14.7	199.4
42409	DRAINAGE OF SALIVARY CYST		106.2	80.5	13.4	200.1
42410	EXCISE PAROTID GLAND/LESION		281.8	189.2	39.5	510.5
42415	EXCISE PAROTID GLAND/LESION		499.3	430.6	80.9	1010.8
42420	EXCISE PAROTID GLAND/LESION		606.5	498.0	90.6	1195.1
42425	EXCISE PAROTID GLAND/LESION		591.7	372.7	66.5	1030.9
42426	EXCISE PAROTID GLAND/LESION		919.9	746.2	142.9	1809.0
42440	EXCISION SUBMAXILLARY GLAND		315.6	267.4	48.8	631.8
42450	EXCISION SUBLINGUAL GLAND		195.2	109.7	20.1	325.0
42800	BIOPSY OF THROAT		26.6	22.2	3.7	52.5
42802	BIOPSY OF THROAT		38.4	38.0	6.4	82.8
42804	BIOPSY OF UPPER NOSE/THROAT		40.6	32.4	5.4	78.4
42806	BIOPSY OF UPPER NOSE/THROAT		50.2	40.5	6.7	97.4

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
42808	EXCISE PHARYNX LESION		74.2	76.1	12.9	163.2
42809	REMOVE PHARYNX FOREIGN BODY		21.1	29.1	4.1	54.3
42810	EXCISION OF NECK CYST		116.2	108.8	20.7	245.7
42815	EXCISION OF NECK CYST		224.8	276.3	52.5	553.6
42820	REMOVE TONSILS AND ADENOIDS		111.3	104.4	16.6	232.3
42821	REMOVE TONSILS AND ADENOIDS		122.2	121.2	20.5	263.9
42825	REMOVAL OF TONSILS		110.1	69.1	12.1	191.3
42826	REMOVAL OF TONSILS		124.3	119.9	20.1	264.3
42830	REMOVAL OF ADENOIDS		83.6	56.4	10.3	150.3
42831	REMOVAL OF ADENOIDS		93.5	69.2	11.3	174.0
42835	REMOVAL OF ADENOIDS		69.1	66.4	13.8	149.3
42836	REMOVAL OF ADENOIDS		98.7	59.7	9.9	168.3
42842	EXTENSIVE SURGERY OF THROAT		145.7	212.6	36.1	394.4
42860	EXCISION OF TONSIL TAGS		64.6	54.1	8.9	127.6
42870	EXCISION OF LINGUAL TONSIL		108.0	75.7	12.4	196.1
42880	EXCISE NOSE/THROAT LESION		121.9	141.2	23.9	287.0
42890	PARTIAL REMOVAL OF PHARYNX		319.2	287.5	49.0	655.7
43110	PARTIAL REMOVAL OF ESOPHAGUS		972.7	692.4	195.8	1860.9
43120	REMOVE ESOPHAGUS & STOMACH		1040.9	733.5	202.7	1977.1
43130	REMOVAL OF ESOPHAGUS POUCH		510.2	350.4	78.9	939.5
44100	BIOPSY OF BOWEL		54.0	41.8	6.2	102.0
44110	EXCISION OF BOWEL LESION(S)		315.6	263.4	67.1	646.1
44111	EXCISION OF BOWEL LESION(S)		411.8	341.9	85.2	838.9
44120	REMOVAL OF SMALL INTESTINE		443.5	376.0	96.2	915.7
44125	REMOVAL OF SMALL INTESTINE		503.3	402.0	102.5	1007.8
44130	BOWEL TO BOWEL FUSION		413.7	322.9	82.8	819.4
44140	PARTIAL REMOVAL OF COLON		492.1	468.9	119.7	1080.7
44141	PARTIAL REMOVAL OF COLON		523.5	496.4	126.6	1146.5
44143	PARTIAL REMOVAL OF COLON		568.7	498.8	127.5	1195.0
44144	PARTIAL REMOVAL OF COLON		541.6	503.6	128.5	1173.7
44145	PARTIAL REMOVAL OF COLON		585.9	565.0	144.4	1295.3
44146	PARTIAL REMOVAL OF COLON		639.9	642.3	162.8	1445.0
44150	REMOVAL OF COLON		626.7	626.5	160.2	1413.4
44155	REMOVAL OF COLON		700.9	675.9	172.9	1549.7
44160	REMOVAL OF COLON		519.9	524.5	134.3	1178.7
44950	APPENDECTOMY		187.4	202.0	50.7	440.1
44955	APPENDECTOMY		90.5	86.7	22.0	199.2
44960	APPENDECTOMY		229.6	263.8	66.7	560.1
45300	PROCTOSIGMOIDOSCOPY		32.1	17.6	2.4	52.1
45302	PROCTOSIGMOIDOSCOPY		63.1	15.5	2.0	80.6
45303	PROCTOSIGMOIDOSCOPY		43.1	20.2	3.5	66.8
45305	PROCTOSIGMOIDOSCOPY; BIOPSY		62.8	28.8	5.9	97.5
45310	PROCTOSIGMOIDOSCOPY		82.1	37.8	8.2	128.1
45315	PROCTOSIGMOIDOSCOPY		94.4	40.3	9.4	144.1
45317	PROCTOSIGMOIDOSCOPY		87.8	43.1	8.3	139.2
45321	PROCTOSIGMOIDOSCOPY		120.1	50.4	11.3	181.8
45330	SIGMOIDOSCOPY		69.1	54.1	6.2	129.4
45331	SIGMOIDOSCOPY AND BIOPSY		95.6	80.6	10.2	186.4
45333	SIGMOIDOSCOPY & POLYPECTOMY		130.9	144.0	23.5	298.4
45334	SIGMOIDOSCOPY FOR BLEEDING		184.7	105.8	13.9	304.4
45336	SIGMOIDOSCOPY,LESION REMOVAL		209.1	108.0	15.6	332.7
45355	SURGICAL COLONOSCOPY		28.8	34.2	4.0	67.0
45360	DIAGNOSTIC COLONOSCOPY		49.9	71.4	8.5	129.9
45365	DIAGNOSTIC COLONOSCOPY		79.4	111.5	13.5	204.4
45367	DIAGNOSTIC COLONOSCOPY		121.9	156.7	32.8	311.4
45368	DIAGNOSTIC COLONOSCOPY		131.2	168.0	16.2	315.4
45369	DIAGNOSTIC COLONOSCOPY		124.0	173.5	25.5	323.0
45370	DIAGNOSTIC COLONOSCOPY		122.5	170.8	30.1	323.4
45372	DIAGNOSTIC COLONOSCOPY		98.7	147.0	30.0	275.7
45378	DIAGNOSTIC COLONOSCOPY		108.3	172.7	24.3	305.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
45379	COLONOSCOPY		130.0	184.3	22.9	337.2
45380	COLONOSCOPY AND BIOPSY		120.1	192.1	24.2	336.4
45382	COLONOSCOPY,CONTROL BLEEDING		142.7	234.0	22.6	399.3
45383	COLONOSCOPY, LESION REMOVAL		147.2	205.4	30.2	382.8
45385	COLONOSCOPY, LESION REMOVAL		156.3	265.5	34.5	456.3
46000	INCISION OF ANAL FISTULA		99.0	52.8	10.1	161.9
46040	INCISION OF RECTAL ABSCESS		90.2	58.8	13.8	162.8
46045	INCISION OF RECTAL ABSCESS		106.2	66.4	16.3	188.9
46050	INCISION OF ANAL ABSCESS		37.0	23.1	5.0	65.1
46060	INCISION OF RECTAL ABSCESS		241.4	181.5	45.0	467.9
46080	INCISION OF ANAL SPHINCTER		108.0	60.5	15.2	183.7
46083	INCISE EXTERNAL HEMORRHOID		23.9	19.1	3.0	46.0
47600	REMOVAL OF GALLBLADDER		299.0	308.6	78.0	685.6
47605	REMOVAL OF GALLBLADDER		319.2	364.0	92.7	775.9
47610	REMOVAL OF GALLBLADDER		380.2	409.0	104.1	893.3
47620	REMOVAL OF GALLBLADDER		442.3	513.3	131.0	1086.6
47630	REMOVE BILE DUCT STONE		169.9	114.7	18.4	303.0
47700	EXPLORATION OF BILE DUCTS		300.8	264.7	66.0	631.5
49500	REPAIR INGUINAL HERNIA		147.2	202.6	48.6	398.4
49505	REPAIR INGUINAL HERNIA		143.6	210.2	52.4	406.2
49510	REPAIR HERNIA, REMOVE TESTIS		158.1	239.2	56.7	454.0
49515	REPAIR INGUINAL HERNIA		157.5	233.8	54.1	445.4
49520	REREPAIR INGUINAL HERNIA		163.5	243.4	61.3	468.2
49525	REPAIR INGUINAL HERNIA		168.1	245.6	61.7	475.4
49530	REPAIR INCARCERATED HERNIA		166.8	232.6	58.6	458.0
49535	REPAIR STRANGULATED HERNIA		174.7	220.8	55.6	451.1
49540	REPAIR LUMBAR HERNIA		157.2	239.8	58.5	455.5
49550	REPAIR FEMORAL HERNIA		149.7	199.4	50.7	399.8
49552	REPAIR FEMORAL HERNIA		173.5	205.2	52.4	431.1
49555	REPAIR FEMORAL HERNIA		167.2	229.5	57.6	454.3
49560	REPAIR ABDOMINAL HERNIA		175.9	247.6	62.7	486.2
49565	REREPAIR ABDOMINAL HERNIA		197.6	284.1	72.1	553.8
49570	REPAIR EPIGASTRIC HERNIA		115.3	158.2	39.7	313.2
49575	REPAIR EPIGASTRIC HERNIA		155.7	203.0	51.6	410.3
49580	REPAIR UMBILICAL HERNIA		119.5	164.8	41.1	325.4
49581	REPAIR UMBILICAL HERNIA		134.0	174.1	43.8	351.9
49590	REPAIR ABDOMINAL HERNIA		149.4	215.6	54.7	419.7
50010	EXPLORATION OF KIDNEY		406.1	304.5	47.6	758.2
50020	DRAINAGE OF KIDNEY ABSCESS		270.0	217.3	36.7	524.0
50040	DRAINAGE OF KIDNEY		324.0	241.6	30.7	596.3
50060	REMOVAL OF KIDNEY STONE		602.2	474.2	63.7	1140.1
50075	REMOVAL OF KIDNEY STONE		721.7	615.4	85.8	1422.9
50080	REMOVAL OF KIDNEY STONE		562.4	437.3	59.2	1058.9
50081	REMOVAL OF KIDNEY STONE		591.7	518.2	71.0	1180.9
50130	REMOVAL OF KIDNEY STONE		474.0	441.2	59.8	975.0
50135	EXPLORATION OF KIDNEY		608.3	595.8	83.4	1287.5
50590	FRAGMENTING OF KIDNEY STONE		380.5	405.5	56.1	842.1
51500	REMOVAL OF BLADDER CYST		274.0	226.3	42.0	542.3
51520	REMOVAL OF BLADDER LESION		319.2	281.5	44.0	644.7
51525	REMOVAL OF BLADDER LESION		474.9	350.0	49.8	874.7
51530	REMOVAL OF BLADDER LESION		379.0	314.9	48.5	742.4
51550	PARTIAL REMOVAL OF BLADDER		459.2	372.8	58.4	890.4
51555	PARTIAL REMOVAL OF BLADDER		535.6	443.5	66.2	1045.3
51565	REVISE BLADDER & URETER(S)		692.4	533.3	77.7	1303.4
51570	REMOVAL OF BLADDER		703.0	540.7	78.2	1321.9
51575	REMOVAL OF BLADDER & NODES		842.4	749.9	107.5	1699.8
51590	REMOVE BLADDER; REVISE TRACT		1017.1	915.9	136.4	2069.4
51595	REMOVE BLADDER; REVISE TRACT		1123.0	1235.7	176.6	2535.3
51597	REMOVAL OF PELVIC STRUCTURES		1050.9	1065.8	196.3	2313.0
51725	SIMPLE CYSTOMETROGRAM		45.8	22.6	3.2	71.6

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
51726	COMPLEX CYSTOMETROGRAM		51.3	29.6	4.2	85.1
51736	URINE FLOW MEASUREMENT		20.3	10.2	1.4	31.9
51741	ELECTRO-UROFLOWMETRY, FIRST		25.2	14.4	2.0	41.6
51772	URETHRA PRESSURE PROFILE		61.6	21.1	3.1	85.8
51785	ANAL/URINARY MUSCLE STUDY		46.1	22.9	3.2	72.2
51795	URINE VOIDING PRESSURE STUDY		45.8	18.7	2.7	67.2
51797	INTRAABDOMINAL PRESSURE TEST		43.9	17.3	2.5	63.7
52000	CYSTOSCOPY		67.9	47.4	6.6	121.9
52005	CYSTOSCOPY & URETER CATHETER		117.7	74.5	10.4	202.6
52007	CYSTOSCOPY AND BIOPSY		149.7	92.9	12.9	255.5
52010	CYSTOSCOPY & DUCT CATHETER		109.5	52.6	7.3	169.4
52204	CYSTOSCOPY		93.2	82.5	11.5	187.2
52214	CYSTOSCOPY AND TREATMENT		112.8	93.3	13.0	219.1
52224	CYSTOSCOPY AND TREATMENT		122.2	97.4	13.5	233.1
52234	CYSTOSCOPY AND TREATMENT		248.0	161.1	22.3	431.4
52235	CYSTOSCOPY AND TREATMENT		282.4	284.5	39.4	606.3
52240	CYSTOSCOPY AND TREATMENT		380.2	371.1	51.3	802.6
52250	CYSTOSCOPY & RADIOTRACER		107.1	103.0	14.5	224.6
52260	CYSTOSCOPY & TREATMENT		87.8	70.5	10.1	168.4
52265	CYSTOSCOPY & TREATMENT		43.1	45.0	6.2	94.3
52270	CYSTOSCOPY & REVISE URETHRA		126.4	121.6	16.9	264.9
52275	CYSTOSCOPY & REVISE URETHRA		143.0	114.5	15.9	273.4
52276	OPTICAL INTERNAL URETHROTOMY		175.3	160.6	22.3	358.2
52281	CYSTOSCOPY AND TREATMENT		83.6	79.4	11.1	174.1
52283	CYSTOSCOPY AND TREATMENT		85.7	42.6	5.9	134.2
52285	CYSTOSCOPY AND TREATMENT		105.9	98.6	13.9	218.4
52290	CYSTOSCOPY AND TREATMENT		97.2	74.7	10.9	182.8
52300	CYSTOSCOPY AND TREATMENT		159.9	114.8	16.1	290.8
52305	CYSTOSCOPY AND TREATMENT		191.0	117.3	16.3	324.6
52310	CYSTOSCOPY AND TREATMENT		113.1	101.5	14.1	228.7
52315	CYSTOSCOPY AND TREATMENT		188.6	139.6	19.4	347.6
52317	REMOVE BLADDER STONE		249.8	196.2	27.2	473.2
52318	REMOVE BLADDER STONE		333.1	252.1	34.9	620.1
52320	CYSTOSCOPY AND TREATMENT		206.4	177.5	24.8	408.7
52325	CYSTOSCOPY, STONE REMOVAL		298.7	215.5	29.7	543.9
52330	CYSTOSCOPY AND TREATMENT		152.7	120.0	16.7	289.4
52332	CYSTOSCOPY AND TREATMENT		142.7	104.9	14.5	262.1
52334	CREATE PASSAGE TO KIDNEY		169.0	125.8	17.4	312.2
52335	ENDOSCOPY OF URINARY TRACT		214.8	180.5	25.1	420.4
52336	CYSTOSCOPY, STONE REMOVAL		413.4	355.0	49.1	817.5
52337	CYSTOSCOPY, STONE REMOVAL		506.0	259.0	35.9	800.9
52338	CYSTOSCOPY AND TREATMENT		280.0	200.6	27.8	508.4
52340	CYSTOSCOPY AND TREATMENT		202.5	155.5	21.6	379.6
52500	REVISION OF BLADDER NECK		299.6	275.4	38.1	613.1
52601	PROSTATECTOMY (TUR)		418.8	502.3	69.5	990.6
52606	CONTROL POSTOP BLEEDING		215.4	100.2	14.0	329.6
52612	PROSTATECTOMY, FIRST STAGE		412.4	424.3	59.2	895.9
52614	PROSTATECTOMY, SECOND STAGE		275.5	254.5	35.3	565.3
52620	REMOVE RESIDUAL PROSTATE		236.5	175.5	24.3	436.3
52630	REMOVE PROSTATE REGROWTH		375.6	462.1	64.4	902.1
52640	RELIEVE BLADDER CONTRACTURE		222.1	262.6	36.4	521.1
52650	PROSTATECTOMY		338.2	400.5	52.1	790.8
54300	REVISION OF PENIS		184.0	86.9	13.2	284.1
54304	REVISION OF PENIS		300.2	276.6	37.6	614.4
54322	RECONSTRUCTION OF URETHRA		337.6	323.5	44.6	705.7
54332	REVISE PENIS, URETHRA		356.9	593.8	81.9	1032.6
54400	INSERT SEMI-RIGID PROSTHESIS		357.2	482.9	66.9	907.0
54402	REMOVE PENIS PROSTHESIS		226.6	195.7	27.3	449.6
54405	INSERT MULTI-COMP PROSTHESIS		558.2	769.0	106.5	1433.7
54407	REMOVE MULTI-COMP PROSTHESIS		274.0	309.7	43.0	626.7

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
54409	REVISE PENIS PROSTHESIS		259.5	301.2	41.5	602.2
55250	REMOVAL OF SPERM DUCT(S)		138.2	81.6	11.8	231.6
57450	PELVIS ENDOSCOPY VIA VAGINA		45.0	29.7	5.5	80.2
57451	PELVIS ENDOSCOPY & BIOPSY		92.6	41.9	10.9	145.4
57452	EXAMINATION OF VAGINA		33.7	18.8	4.9	57.4
57454	VAGINA EXAMINATION & BIOPSY		52.1	37.3	10.5	99.9
58100	BIOPSY OF UTERUS LINING		18.4	20.8	5.6	44.8
58101	WASH SAMPLE OF UTERUS LINING		16.5	12.2	2.5	31.2
58102	CURETTAGE OF UTERUS LINING		25.2	31.3	8.5	65.0
58103	MENSTRUAL EXTRACTION		31.5	32.2	8.5	72.2
58120	DILATION AND CURETTAGE		90.2	101.6	27.8	219.6
58140	REMOVAL OF UTERUS LESION		292.4	213.5	55.7	561.6
58145	REMOVAL OF UTERUS LESION		217.2	223.6	58.5	499.3
58150	TOTAL HYSTERECTOMY		296.6	383.1	107.9	787.6
58152	TOTAL HYSTERECTOMY		347.9	487.3	134.9	970.1
58180	PARTIAL HYSTERECTOMY		309.9	321.6	87.5	719.0
58200	EXTENSIVE HYSTERECTOMY		350.3	475.6	135.3	961.2
58205	EXTENSIVE HYSTERECTOMY		490.0	602.8	177.3	1270.1
58260	VAGINAL HYSTERECTOMY		266.1	377.8	107.9	751.8
58265	HYSTERECTOMY & VAGINA REPAIR		307.8	411.8	117.9	837.5
58267	HYSTERECTOMY & VAGINA REPAIR		296.6	450.8	122.7	870.1
58270	HYSTERECTOMY & VAGINA REPAIR		310.8	412.8	118.1	841.7
58275	HYSTERECTOMY, REVISE VAGINA		317.4	437.9	126.6	881.9
58280	HYSTERECTOMY, REVISE VAGINA		319.2	428.7	120.7	868.6
58285	EXTENSIVE HYSTERECTOMY		349.7	502.4	146.1	998.2
58900	BIOPSY OF OVARY(S)		161.1	156.2	41.1	358.4
58920	PARTIAL REMOVAL OF OVARY(S)		177.1	220.1	59.7	456.9
58925	REMOVAL OF OVARIAN CYST(S)		200.3	209.2	54.6	464.1
58940	REMOVAL OF OVARY(S)		175.0	194.0	50.6	419.6
58945	REMOVAL OF OVARY(S)		245.3	230.8	65.2	541.3
58980	LAPAROSCOPY OF PELVIS		123.4	148.2	41.6	313.2
58982	LAPAROSCOPY; TUBAL CAUTERY		123.4	198.9	56.4	378.7
58983	LAPAROSCOPY; TUBAL BLOCK		123.4	206.6	60.3	390.3
58984	LAPAROSCOPY OF PELVIS		152.7	153.3	42.8	348.8
58985	LAPAROSCOPY OF PELVIS		153.6	155.9	43.3	352.8
58986	PELVIS LAPAROSCOPY & BIOPSY		138.5	159.5	41.8	339.8
58987	LAPAROSCOPY OF PELVIS		145.4	155.6	42.3	343.3
58990	DIAGNOSTIC HYSTEROSCOPY		70.3	58.7	16.8	145.8
59000	AMNIOCENTESIS		96.5	29.0	8.0	133.5
59020	FETAL OXYTOCIN STRESS TEST		29.3	22.0	6.3	57.6
59025	FETAL NON-STRESS TEST		23.0	15.3	4.2	42.5
59050	FETAL MONITOR W/REPORT		38.4	19.2	5.4	63.0
59100	REMOVE UTERUS LESION		398.3	94.0	23.7	516.0
59105	HYSTEROTOMY, ABDOMINAL		189.2	112.3	33.1	334.6
59500	CESAREAN SECTION, LOW CERVICAL		225.4	300.4	85.0	610.8
59501	CESAREAN SECTION, LOW CERVICAL		313.2	375.4	104.4	793.0
59520	CESAREAN SECTION, CLASSIC		225.7	253.5	65.3	544.5
59540	CESAREAN SECTION, EXTRAPERI		263.4	479.3	42.0	784.7
59800	TREATMENT OF ABORTION		79.4	47.1	11.8	138.3
59801	TREATMENT OF ABORTION		107.1	106.2	29.9	243.2
59810	TREATMENT OF ABORTION		124.9	96.6	26.0	247.5
59811	TREATMENT OF ABORTION		115.3	132.7	37.0	285.0
59820	CARE OF MISCARRIAGE		111.6	104.0	29.2	244.8
59830	TREAT UTERUS INFECTION		118.3	69.0	20.3	207.6
59840	ABORTION		102.9	97.9	27.3	228.1
59841	ABORTION		109.2	110.7	30.1	250.0
59850	ABORTION		112.2	135.9	40.1	288.2
59851	ABORTION		114.7	115.1	32.9	262.7
59852	ABORTION		127.6	138.8	41.0	307.4
61526	REMOVAL OF BRAIN LESION		952.2	1062.3	174.8	2189.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
62270	SPINAL FLUID TAP, DIAGNOSTIC		35.7	22.6	2.0	60.3
62272	DRAIN SPINAL FLUID		42.8	28.3	2.7	73.8
62273	TREAT LUMBAR SPINE LESION		64.3	49.3	7.3	120.9
62274	INJECT SPINAL ANESTHETIC		39.2	23.2	3.2	65.6
62276	INJECT SPINAL ANESTHETIC		49.6	42.1	6.9	98.6
62277	INJECT SPINAL ANESTHETIC		42.8	34.7	4.0	81.5
62278	INJECT SPINAL ANESTHETIC		61.9	47.6	7.8	117.3
62279	INJECT SPINAL ANESTHETIC		70.0	35.0	6.9	111.9
62280	TREAT SPINAL CORD LESION		64.3	24.5	2.3	91.1
62282	TREAT SPINAL CANAL LESION		81.5	66.5	11.3	159.3
62284	INJECTION FOR MYELOGRAM		92.3	66.2	8.6	167.1
62288	INJECTION INTO SPINAL CANAL		51.3	51.3	7.2	109.8
62289	INJECTION INTO SPINAL CANAL		63.1	59.8	10.0	132.9
62290	INJECT FOR SPINE DISK X-RAY		108.3	86.0	13.8	208.1
62291	INJECT FOR SPINE DISK X-RAY		91.4	51.4	6.5	149.3
62292	INJECTION INTO DISK LESION		536.5	485.4	83.1	1105.0
62295	LAMINECTOMY, CERVICAL		689.7	518.8	84.0	1292.5
62296	LAMINECTOMY, THORACIC		627.3	775.1	140.5	1542.9
62297	LAMINECTOMY, LUMBAR		525.6	670.4	120.1	1316.1
62301	LAMINECTOMY, CERVICAL		755.8	684.3	109.2	1549.3
62303	LAMINECTOMY, LUMBAR		665.9	484.4	87.8	1238.1
63001	REMOVAL OF SPINAL LAMINA		613.1	705.2	127.8	1446.1
63003	REMOVAL OF SPINAL LAMINA		632.1	697.2	125.7	1455.0
63005	REMOVAL OF SPINAL LAMINA		562.1	738.6	132.4	1433.1
63010	REMOVAL OF SPINAL LAMINA		572.4	654.3	114.5	1341.2
63015	REMOVAL OF SPINAL LAMINA		704.2	821.2	146.3	1671.7
63016	REMOVAL OF SPINAL LAMINA		728.6	828.9	154.0	1711.5
63017	REMOVAL OF SPINAL LAMINA		668.6	931.5	167.3	1767.4
63020	NECK SPINE DISK SURGERY		533.4	687.3	123.8	1344.5
63021	NECK SPINE DISK SURGERY		610.4	811.7	145.0	1567.1
63030	LOW BACK DISK SURGERY		515.6	638.7	115.1	1269.4
63031	LOW BACK DISK SURGERY		589.6	800.9	143.8	1534.3
63035	ADDED SPINAL DISK SURGERY		208.8	174.6	31.2	414.6
63040	NECK SPINE DISK SURGERY		636.9	852.9	148.8	1638.6
63041	THORACIC DISK SURGERY		690.0	898.6	162.9	1751.5
63042	LOW BACK DISK SURGERY		636.3	859.8	154.8	1650.9
63060	NECK SPINE DISK SURGERY		562.4	652.8	118.3	1333.5
63076	NECK SPINE DISK SURGERY		399.5	221.5	41.4	662.4
64702	REVISE FINGER/TOE NERVE		86.3	139.1	26.2	251.6
64704	REVISE HAND/FOOT NERVE		92.3	177.2	33.2	302.7
64708	REVISE ARM/LEG NERVE		132.5	233.3	44.3	410.1
64718	REVISE ULNAR NERVE AT ELBOW		148.7	287.2	53.1	489.0
64719	REVISE ULNAR NERVE AT WRIST		99.6	166.3	31.6	297.5
64721	REVISE MEDIAN NERVE AT WRIST		104.7	230.0	43.6	378.3
64722	RELIEVE PRESSURE ON NERVE(S)		114.0	208.5	38.9	361.4
64727	INTERNAL NERVE REVISION		85.4	110.7	21.3	217.4
65800	DRAINAGE OF EYE		91.7	58.9	5.0	155.6
65805	DRAINAGE OF EYE		98.7	50.7	4.3	153.7
65815	DRAINAGE OF EYE		144.8	131.7	11.3	287.8
65850	INCISION OF EYE		309.0	435.2	36.5	780.7
65855	LASER SURGERY OF EYE		212.4	370.0	31.1	613.5
66850	REMOVAL OF LENS MATERIAL		409.1	478.5	40.2	927.8
66920	EXTRACTION OF LENS		347.3	446.3	37.8	831.4
66940	EXTRACTION OF LENS		410.0	467.8	39.3	917.1
66983	REMOVE CATARACT, INSERT LENS		470.7	739.5	62.3	1272.5
66984	REMOVE CATARACT, INSERT LENS		476.7	750.5	63.0	1290.2
66985	INSERT LENS PROSTHESIS		334.0	469.6	39.4	843.0
67105	REPAIR, DETACHED RETINA		237.1	423.6	35.6	696.3
67107	REPAIR DETACHED RETINA		551.5	742.1	62.3	1355.9
67108	REPAIR DETACHED RETINA		804.1	1229.4	103.2	2136.7

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
67120	REMOVE EYE IMPLANT MATERIAL		197.0	228.4	19.2	444.6
67208	TREATMENT OF RETINAL LESION		231.1	347.5	29.2	607.8
67210	TREATMENT OF RETINAL LESION		207.0	336.4	28.2	571.6
67218	TREATMENT OF RETINAL LESION		300.2	394.3	33.9	728.4
67228	TREATMENT OF RETINAL LESION		207.9	337.1	28.3	573.3
67311	REVISE EYE MUSCLE		268.5	290.3	24.4	583.2
67312	REVISE TWO EYE MUSCLES		291.5	353.4	29.7	674.6
67313	REVISE EYE MUSCLES		337.3	388.0	32.7	758.0
67320	REVISE EYE MUSCLE(S)		353.6	400.0	33.5	787.1
67331	EYE SURGERY FOLLOW-UP		299.0	327.1	27.8	653.9
67332	REREVISE EYE MUSCLES		356.6	363.7	30.5	750.8
67800	REMOVE EYELID LESION		34.8	31.4	2.7	68.9
67801	REMOVE EYELID LESIONS		52.1	45.9	3.9	101.9
67805	REMOVE EYELID LESIONS		62.2	46.8	4.0	113.0
67808	REMOVE EYELID LESION(S)		89.6	66.4	5.7	161.7
67810	BIOPSY OF EYELID		37.9	26.2	2.1	66.2
67820	REVISE EYELASHES		15.9	12.1	1.0	29.0
67825	REVISE EYELASHES		38.9	26.5	2.2	67.6
67830	REVISE EYELASHES		113.1	105.9	8.9	227.9
67840	REMOVE EYELID LESION		161.7	39.1	3.3	204.1
67850	TREAT EYELID LESION		143.3	29.4	2.5	175.2
69200	CLEAR OUTER EAR CANAL		27.4	11.1	1.3	39.8
69210	REMOVE IMPACTED EAR WAX		13.7	6.8	0.8	21.3
69220	CLEAN OUT MASTOID CAVITY		33.7	15.1	2.4	51.2
69221	CLEAN OUT MASTOID CAVITY		30.4	13.7	1.9	46.0
69222	CLEAN OUT MASTOID CAVITY		99.0	27.2	4.7	130.9
69223	CLEAN OUT MASTOID CAVITY		84.5	34.3	6.2	125.0
69420	INCISION OF EARDRUM		35.9	21.0	3.4	60.3
69424	REMOVE VENTILATING TUBE		30.7	20.8	3.3	54.8
69425	REMOVE VENTILATING TUBE		60.9	33.1	5.4	99.4
69433	CREATE EARDRUM OPENING		37.6	40.5	6.7	84.8
69434	CREATE EARDRUM OPENING		70.6	58.8	9.6	139.2
69436	CREATE EARDRUM OPENING		68.2	59.6	9.8	137.6
69437	CREATE EARDRUM OPENING		86.6	90.5	14.9	192.0
69440	EXPLORATION OF MIDDLE EAR		250.7	257.2	42.6	550.5
69601	MASTOID SURGERY REVISION		458.0	489.6	80.4	1028.0
69604	MASTOID SURGERY REVISION		552.7	666.8	110.3	1329.8
69610	REPAIR OF EARDRUM		25.0	27.2	4.3	56.5
69611	REPAIR OF EARDRUM		36.5	28.0	4.7	69.2
69620	REPAIR OF EARDRUM		294.5	315.0	52.2	661.7
69631	REPAIR EARDRUM STRUCTURES		474.3	550.4	91.2	1115.9
69632	REBUILD EARDRUM STRUCTURES		547.6	590.4	98.6	1236.6
69633	REBUILD EARDRUM STRUCTURES		539.5	598.0	99.2	1236.7
69635	REPAIR EARDRUM STRUCTURES		551.2	638.5	106.1	1295.8
69636	REBUILD EARDRUM STRUCTURES		609.8	657.4	109.9	1377.1
69637	REBUILD EARDRUM STRUCTURES		608.6	773.9	126.7	1509.2
69641	REVISE MIDDLE EAR & MASTOID		587.4	651.1	108.0	1346.5
69642	REVISE MIDDLE EAR & MASTOID		637.8	701.2	117.2	1456.2
69643	REVISE MIDDLE EAR & MASTOID		658.6	714.6	119.5	1492.7
69644	REVISE MIDDLE EAR & MASTOID		724.1	801.8	133.5	1659.4
69645	REVISE MIDDLE EAR & MASTOID		655.3	655.6	110.2	1421.1
69646	REVISE MIDDLE EAR & MASTOID		679.8	770.3	128.0	1578.1
69660	REVISE MIDDLE EAR BONE		533.1	560.2	93.1	1186.4
69661	REVISE MIDDLE EAR BONE		562.4	564.6	93.9	1220.9
69667	REPAIR MIDDLE EAR STRUCTURES		481.5	431.8	71.9	985.2
69930	IMPLANT COCHLEAR DEVICE		624.9	886.2	146.5	1657.6
70030 *	X-RAY EYE FOR FOREIGN BODY		17.3	13.6	1.4	32.3

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
70040 *	X-RAY EYE FOR FOREIGN BODY		11.0	15.3	1.9	28.2
70100 *	X-RAY EXAM OF JAW		9.9	14.2	1.6	25.7
70110 *	X-RAY EXAM OF JAW		9.9	18.8	2.1	30.8
70120 *	X-RAY EXAM OF MASTOIDS		11.0	16.3	1.9	29.2
70130 *	X-RAY EXAM OF MASTOIDS		16.2	25.1	3.6	44.9
70134 *	X-RAY EXAM OF MIDDLE EAR		17.3	24.1	3.6	45.0
70140 *	X-RAY EXAM OF FACIAL BONES		8.5	14.1	1.6	24.2
70150 *	X-RAY EXAM OF FACIAL BONES		9.6	18.7	2.0	30.3
70160 *	X-RAY EXAM OF NASAL BONES		7.1	12.8	1.4	21.3
70170 *	X-RAY EXAM OF TEAR DUCT		21.4	18.2	2.1	41.7
70171 *	X-RAY EXAM OF TEAR DUCT		23.0	27.8	3.0	53.8
70190 *	X-RAY EXAM OF EYE SOCKETS		7.7	14.5	1.5	23.7
70200 *	X-RAY EXAM OF EYE SOCKETS		8.2	16.5	1.8	26.5
70210 *	X-RAY EXAM OF SINUSES	PC	5.8	5.6	0.6	12.0
70210 *	X-RAY EXAM OF SINUSES		9.1	12.2	1.7	23.0
70220 *	X-RAY EXAM OF SINUSES	PC	7.4	7.9	0.9	16.2
70220 *	X-RAY EXAM OF SINUSES		13.7	20.7	2.5	36.9
70240 *	X-RAY EXAM PITUITARY SADDLE		7.7	13.8	1.4	22.9
70250 *	X-RAY EXAM OF SKULL	PC	6.9	6.8	0.8	14.5
70250 *	X-RAY EXAM OF SKULL		9.3	16.0	1.7	27.0
70260 *	X-RAY EXAM OF SKULL	PC	8.8	9.1	1.0	18.9
70260 *	X-RAY EXAM OF SKULL		11.5	22.3	2.4	36.2
70300 *	X-RAY EXAM OF TEETH		10.7	4.4	0.6	15.7
70310 *	X-RAY EXAM OF TEETH		9.9	6.6	0.8	17.3
70320 *	FULL MOUTH X-RAY OF TEETH		15.1	13.3	1.7	30.1
70328 *	X-RAY EXAM OF JAW JOINT		21.4	18.1	2.2	41.7
70330 *	X-RAY EXAM OF JAW JOINTS		20.3	21.2	2.6	44.1
70332 *	X-RAY EXAM OF JAW JOINT		25.5	27.2	3.2	55.9
70333 *	X-RAY EXAM OF JAW JOINT		60.3	46.8	5.3	112.4
70350 *	X-RAY HEAD FOR ORTHODONTIA		11.8	13.2	2.0	27.0
70355 *	PANORAMIC X-RAY OF JAWS	PC	7.1	6.0	0.7	13.8
70355 *	PANORAMIC X-RAY OF JAWS		11.8	14.1	2.3	28.2
70360 *	X-RAY EXAM OF NECK		11.2	12.1	1.4	24.7
70370 *	THROAT X-RAY & FLUOROSCOPY		14.5	14.4	1.7	30.6
70380 *	X-RAY EXAM OF SALIVARY GLAND		20.8	15.8	2.0	38.6
70390 *	X-RAY EXAM OF SALIVARY DUCT		25.0	19.8	2.2	47.0
70391 *	X-RAY EXAM OF SALIVARY DUCT		19.7	31.8	3.7	55.2
70450 *	CAT SCAN OF HEAD OR BRAIN	PC	29.9	34.5	3.9	68.3
70450 *	CAT SCAN OF HEAD OR BRAIN		35.7	90.7	10.1	136.5
70460 *	CONTRAST CAT SCAN OF HEAD	PC	32.9	38.1	4.3	75.3
70460 *	CONTRAST CAT SCAN OF HEAD		40.0	105.4	11.7	157.1
70470 *	CONTRAST CAT SCANS OF HEAD	PC	37.0	44.6	5.0	86.6
70470 *	CONTRAST CAT SCANS OF HEAD		46.4	129.7	14.5	190.6
70480 *	CAT SCAN OF SKULL	PC	29.1	32.2	3.6	64.9
70480 *	CAT SCAN OF SKULL		35.1	88.9	10.0	134.0
70481 *	CONTRAST CAT SCAN OF SKULL	PC	33.5	36.3	4.1	73.9
70481 *	CONTRAST CAT SCAN OF SKULL		38.4	96.7	10.8	145.9
70486 *	CAT SCAN OF FACE, JAW	PC	24.1	34.5	3.9	62.5
70486 *	CAT SCAN OF FACE, JAW		26.3	100.0	11.3	137.6
71010 *	X-RAY EXAM OF CHEST		5.8	10.8	1.0	17.6
71015 *	STEREO X-RAY EXAM OF CHEST		8.0	15.4	1.5	24.9
71020 *	X-RAY EXAM OF CHEST	PC	6.6	5.8	0.7	13.1
71020 *	X-RAY EXAM OF CHEST		11.0	15.4	1.5	27.9
71021 *	X-RAY EXAM OF CHEST	PC	5.8	4.5	0.5	10.8
71021 *	X-RAY EXAM OF CHEST		10.4	12.7	1.3	24.4
71022 *	X-RAY EXAM OF CHEST	PC	6.6	6.2	0.7	13.5

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
71022 *	X-RAY EXAM OF CHEST		10.7	17.1	1.7	29.5
71023 *	CHEST X-RAY AND FLUOROSCOPY		9.6	13.8	1.4	24.8
71030 *	X-RAY EXAM OF CHEST	PC	8.2	6.8	0.8	15.8
71030 *	X-RAY EXAM OF CHEST		11.0	18.2	1.9	31.1
71034 *	CHEST X-RAY & FLUOROSCOPY		11.5	16.5	1.6	29.6
71035 *	X-RAY EXAM OF CHEST		8.0	11.5	1.2	20.7
71036 *	X-RAY GUIDANCE FOR BIOPSY		22.2	17.5	1.6	41.3
71038 *	X-RAY GUIDANCE FOR BIOPSY		18.9	25.6	2.7	47.2
71040 *	CONTRAST X-RAY OF BRONCHI		13.2	14.6	1.5	29.3
71041 *	CONTRAST X-RAY OF BRONCHI		14.3	27.5	4.8	46.6
71060 *	CONTRAST X-RAY OF BRONCHI		9.3	12.0	1.2	22.5
71061 *	CONTRAST X-RAY OF BRONCHI		10.7	39.7	5.2	55.6
71090 *	X-RAY & PACEMAKER INSERTION		14.8	17.3	2.3	34.4
71100 *	X-RAY EXAM OF RIBS	PC	6.3	6.2	0.7	13.2
71100 *	X-RAY EXAM OF RIBS		10.7	16.0	1.8	28.5
71101 *	X-RAY EXAM OF RIBS, CHEST	PC	7.1	7.0	0.8	14.9
71101 *	X-RAY EXAM OF RIBS, CHEST		10.7	17.5	1.9	30.1
71110 *	X-RAY EXAM OF RIBS	PC	8.2	8.1	0.9	17.2
71110 *	X-RAY EXAM OF RIBS		12.6	19.4	2.2	34.2
71111 *	X-RAY EXAM OF RIBS, CHEST	PC	9.1	9.3	1.0	19.4
71111 *	X-RAY EXAM OF RIBS, CHEST		13.2	21.9	2.4	37.5
71120 *	X-RAY EXAM OF BREASTBONE		10.7	14.8	1.7	27.2
71130 *	X-RAY EXAM OF BREASTBONE		17.0	16.8	2.2	36.0
71250 *	CAT SCAN OF CHEST	PC	35.1	38.4	4.3	77.8
71250 *	CAT SCAN OF CHEST		46.9	115.1	12.9	174.9
71260 *	CONTRAST CAT SCAN OF CHEST	PC	36.8	42.6	4.8	84.2
71260 *	CONTRAST CAT SCAN OF CHEST		49.6	128.0	14.3	191.9
71270 *	CONTRAST CAT SCANS OF CHEST	PC	41.4	46.6	5.2	93.2
71270 *	CONTRAST CAT SCANS OF CHEST		52.1	130.8	14.7	197.6
72010 *	X-RAY EXAM OF SPINE	PC	14.3	12.0	1.4	27.7
72010 *	X-RAY EXAM OF SPINE		20.3	26.8	3.2	50.3
72020 *	X-RAY EXAM OF SPINE	PC	4.9	4.8	0.5	10.2
72020 *	X-RAY EXAM OF SPINE		9.1	12.3	1.8	23.2
72040 *	X-RAY EXAM OF NECK SPINE	PC	6.9	6.5	0.7	14.1
72040 *	X-RAY EXAM OF NECK SPINE		11.0	18.1	2.3	31.4
72050 *	X-RAY EXAM OF NECK SPINE	PC	8.5	8.7	1.0	18.2
72050 *	X-RAY EXAM OF NECK SPINE		15.1	24.1	2.9	42.1
72052 *	X-RAY EXAM OF NECK SPINE	PC	9.9	9.9	1.1	20.9
72052 *	X-RAY EXAM OF NECK SPINE		16.2	26.6	3.2	46.0
72070 *	X-RAY EXAM OF THORAX SPINE	PC	6.6	6.3	0.7	13.6
72070 *	X-RAY EXAM OF THORAX SPINE		11.5	17.7	2.3	31.5
72072 *	X-RAY EXAM OF THORACIC SPINE	PC	7.1	7.0	0.8	14.9
72072 *	X-RAY EXAM OF THORACIC SPINE		10.1	18.5	2.1	30.7
72074 *	X-RAY EXAM OF THORACIC SPINE	PC	8.2	8.1	0.9	17.2
72074 *	X-RAY EXAM OF THORACIC SPINE		11.5	20.9	2.5	34.9
72080 *	X-RAY EXAM OF TRUNK SPINE	PC	6.9	6.7	0.8	14.4
72080 *	X-RAY EXAM OF TRUNK SPINE		11.5	19.0	2.8	33.3
72090 *	X-RAY EXAM OF TRUNK SPINE		11.5	19.5	3.0	34.0
72100 *	X-RAY EXAM OF LOWER SPINE	PC	7.1	7.1	0.8	15.0
72100 *	X-RAY EXAM OF LOWER SPINE		12.9	20.1	2.7	35.7
72110 *	X-RAY EXAM OF LOWER SPINE	PC	9.9	10.0	1.1	21.0
72110 *	X-RAY EXAM OF LOWER SPINE		17.8	27.5	3.5	48.8
72114 *	X-RAY EXAM OF LOWER SPINE	PC	9.9	10.7	1.2	21.8
72114 *	X-RAY EXAM OF LOWER SPINE		19.5	29.4	4.3	53.2
72120 *	X-RAY EXAM OF LOWER SPINE	PC	9.3	7.3	0.8	17.4
72120 *	X-RAY EXAM OF LOWER SPINE		17.0	21.8	3.2	42.0
72125 *	CAT SCAN OF NECK SPINE	PC	34.8	39.0	4.4	78.2

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
72125 *	CAT SCAN OF NECK SPINE		54.3	116.5	13.1	183.9
72126 *	CONTRAST CAT SCAN OF NECK	PC	39.2	44.4	5.0	88.5
72126 *	CONTRAST CAT SCAN OF NECK		59.8	132.6	14.9	207.3
72127 *	CONTRAST CAT SCANS OF NECK	PC	36.5	52.3	5.9	94.7
72127 *	CONTRAST CAT SCANS OF NECK		57.9	157.7	17.4	233.0
72128 *	CAT SCAN OF THORAX SPINE	PC	35.4	37.6	4.2	77.2
72128 *	CAT SCAN OF THORAX SPINE		45.0	119.7	13.4	178.1
72131 *	CAT SCAN OF LOWER SPINE	PC	34.8	38.6	4.3	77.7
72131 *	CAT SCAN OF LOWER SPINE		57.1	125.8	14.2	197.1
72140 *	MRI, SPINAL CORD		62.5	229.2	25.8	317.5
72170 *	X-RAY EXAM OF PELVIS	PC	5.5	5.0	0.6	11.1
72170 *	X-RAY EXAM OF PELVIS		9.1	14.1	2.1	25.3
72180 *	X-RAY EXAM OF PELVIS	PC	6.0	6.2	0.7	12.9
72180 *	X-RAY EXAM OF PELVIS		10.1	18.1	2.8	31.0
72190 *	X-RAY EXAM OF PELVIS	PC	7.1	6.8	0.8	14.7
72190 *	X-RAY EXAM OF PELVIS		12.1	19.2	2.8	34.1
72192 *	CAT SCAN OF PELVIS	PC	31.8	33.7	3.8	69.3
72192 *	CAT SCAN OF PELVIS		38.4	92.7	10.4	141.5
72193 *	CONTRAST CAT SCAN OF PELVIS	PC	34.6	39.3	4.4	78.5
72193 *	CONTRAST CAT SCAN OF PELVIS		46.1	108.6	12.1	166.8
72194 *	CONTRAST CAT SCANS OF PELVIS	PC	40.6	43.4	4.9	88.9
72194 *	CONTRAST CAT SCANS OF PELVIS		54.6	124.6	14.0	193.2
72200 *	X-RAY EXAM SACROILIAC JOINTS	PC	6.0	5.5	0.6	12.1
72200 *	X-RAY EXAM SACROILIAC JOINTS		12.1	13.5	1.6	27.2
72202 *	X-RAY EXAM SACROILIAC JOINTS	PC	8.0	6.5	0.7	15.2
72202 *	X-RAY EXAM SACROILIAC JOINTS		11.0	17.5	2.0	30.5
72220 *	X-RAY EXAM OF TAILBONE	PC	6.0	5.7	0.6	12.3
72220 *	X-RAY EXAM OF TAILBONE		9.9	15.6	2.0	27.5
72240 *	CONTRAST X-RAY OF NECK SPINE		23.3	27.2	3.0	53.5
72255 *	CONTRAST X-RAY THORAX SPINE		26.9	19.9	2.3	49.1
72265 *	CONTRAST X-RAY LOWER SPINE		24.1	28.7	3.4	56.2
72266 *	CONTRAST X-RAY LOWER SPINE		75.4	93.1	11.1	179.6
72270 *	CONTRAST X-RAY OF SPINE		34.6	29.0	3.4	67.0
72271 *	CONTRAST X-RAY OF SPINE		85.3	122.7	14.6	222.6
72285 *	X-RAY OF NECK SPINE DISK		30.7	28.6	3.2	62.5
72295 *	X-RAY OF LOWER SPINE DISK		19.7	16.9	2.2	38.8
73000 *	X-RAY EXAM OF COLLARBONE	PC	7.4	4.6	0.5	12.5
73000 *	X-RAY EXAM OF COLLARBONE		12.9	12.9	1.9	27.7
73010 *	X-RAY EXAM OF SHOULDER BLADE		10.4	14.5	2.0	26.9
73020 *	X-RAY EXAM OF SHOULDER	PC	6.9	4.7	0.5	12.1
73020 *	X-RAY EXAM OF SHOULDER		13.2	13.7	2.0	28.9
73030 *	X-RAY EXAM OF SHOULDER	PC	8.2	5.6	0.6	14.4
73030 *	X-RAY EXAM OF SHOULDER		15.4	16.1	2.3	33.8
73040 *	CONTRAST X-RAY OF SHOULDER		20.6	19.5	2.4	42.5
73041 *	CONTRAST X-RAY OF SHOULDER		41.1	41.2	5.1	87.4
73050 *	X-RAY EXAM OF SHOULDERS	PC	9.1	6.1	0.7	15.9
73050 *	X-RAY EXAM OF SHOULDERS		12.9	16.9	2.5	32.3
73060 *	X-RAY EXAM OF HUMERUS	PC	7.4	5.0	0.6	13.0
73060 *	X-RAY EXAM OF HUMERUS		12.9	14.5	2.3	29.7
73070 *	X-RAY EXAM OF ELBOW	PC	7.1	4.6	0.5	12.2
73070 *	X-RAY EXAM OF ELBOW		13.2	13.4	2.1	28.7
73080 *	X-RAY EXAM OF ELBOW	PC	8.0	5.2	0.6	13.8
73080 *	X-RAY EXAM OF ELBOW		13.4	14.6	2.1	30.1
73090 *	X-RAY EXAM OF FOREARM	PC	10.7	4.5	0.5	15.7
73090 *	X-RAY EXAM OF FOREARM		17.6	12.9	1.9	32.4
73092 *	X-RAY EXAM OF ARM, INFANT		15.6	14.7	1.9	32.2
73100 *	X-RAY EXAM OF WRIST	PC	10.7	4.4	0.5	15.6

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
73100 *	X-RAY EXAM OF WRIST		20.3	13.2	2.2	35.7
73110 *	X-RAY EXAM OF WRIST	PC	11.5	5.1	0.6	17.2
73110 *	X-RAY EXAM OF WRIST		20.8	14.8	2.2	37.8
73115 *	CONTRAST X-RAY OF WRIST		18.7	13.6	1.9	34.2
73116 *	CONTRAST X-RAY OF WRIST		22.2	17.0	2.4	41.6
73120 *	X-RAY EXAM OF HAND	PC	5.8	4.3	0.5	10.6
73120 *	X-RAY EXAM OF HAND		9.1	12.1	1.5	22.7
73130 *	X-RAY EXAM OF HAND	PC	5.5	5.1	0.6	11.2
73130 *	X-RAY EXAM OF HAND		9.9	14.2	1.9	26.0
73140 *	X-RAY EXAM OF FINGER(S)	PC	4.1	3.8	0.4	8.3
73140 *	X-RAY EXAM OF FINGER(S)		8.0	10.8	1.6	20.4
73500 *	X-RAY EXAM OF HIP	PC	6.0	5.3	0.6	11.9
73500 *	X-RAY EXAM OF HIP		10.1	14.6	2.3	27.0
73510 *	X-RAY EXAM OF HIP	PC	7.7	6.4	0.7	14.8
73510 *	X-RAY EXAM OF HIP		12.9	18.5	2.9	34.3
73520 *	X-RAY EXAM OF HIPS	PC	9.9	7.8	0.9	18.6
73520 *	X-RAY EXAM OF HIPS		15.6	20.9	3.1	39.6
73525 *	CONTRAST X-RAY OF HIP		12.9	20.4	2.8	36.1
73526 *	CONTRAST X-RAY OF HIP		27.4	37.8	5.0	70.2
73530 *	X-RAY EXAM OF HIP		9.1	15.8	2.2	27.1
73540 *	X-RAY EXAM OF PELVIS & HIPS	PC	7.1	6.7	0.7	14.5
73540 *	X-RAY EXAM OF PELVIS & HIPS		11.5	17.6	2.7	31.8
73550 *	X-RAY EXAM OF THIGH	PC	6.3	5.4	0.6	12.3
73550 *	X-RAY EXAM OF THIGH		10.1	16.0	2.5	28.6
73560 *	X-RAY EXAM OF KNEE	PC	5.2	4.8	0.5	10.5
73560 *	X-RAY EXAM OF KNEE		9.9	14.3	2.2	26.4
73562 *	X-RAY EXAM OF KNEE	PC	5.8	5.8	0.7	12.3
73562 *	X-RAY EXAM OF KNEE		10.7	17.1	2.5	30.3
73564 *	X-RAY EXAM OF KNEE	PC	6.3	6.4	0.7	13.4
73564 *	X-RAY EXAM OF KNEE		14.0	18.9	3.0	35.9
73580 *	CONTRAST X-RAY OF KNEE JOINT		13.7	22.2	2.9	38.8
73581 *	CONTRAST X-RAY OF KNEE JOINT		25.0	43.2	5.3	73.5
73590 *	X-RAY EXAM OF LOWER LEG	PC	5.2	4.8	0.5	10.5
73590 *	X-RAY EXAM OF LOWER LEG		8.8	13.9	2.1	24.8
73592 *	X-RAY EXAM OF LEG, INFANT		6.6	13.8	2.1	22.5
73600 *	X-RAY EXAM OF ANKLE	PC	5.2	4.5	0.5	10.2
73600 *	X-RAY EXAM OF ANKLE		9.3	13.2	2.0	24.5
73610 *	X-RAY EXAM OF ANKLE	PC	5.5	5.2	0.6	11.3
73610 *	X-RAY EXAM OF ANKLE		9.9	15.2	2.3	27.4
73615 *	CONTRAST X-RAY OF ANKLE	PC	6.3	6.6	0.7	13.6
73615 *	CONTRAST X-RAY OF ANKLE		8.8	15.3	1.9	26.0
73616 *	CONTRAST X-RAY OF ANKLE		9.3	20.6	3.0	32.9
73620 *	X-RAY EXAM OF FOOT	PC	8.5	4.6	0.5	13.6
73620 *	X-RAY EXAM OF FOOT		15.4	12.8	1.9	30.1
73630 *	X-RAY EXAM OF FOOT	PC	8.2	5.1	0.6	13.9
73630 *	X-RAY EXAM OF FOOT		17.0	14.7	2.1	33.8
73650 *	X-RAY EXAM OF HEEL	PC	7.1	4.4	0.5	12.0
73650 *	X-RAY EXAM OF HEEL		14.0	12.8	1.9	28.7
73660 *	X-RAY EXAM OF TOE(S)	PC	6.3	3.8	0.4	10.5
73660 *	X-RAY EXAM OF TOE(S)		11.8	10.7	1.5	24.0
74000 *	X-RAY EXAM OF ABDOMEN		8.5	11.5	1.3	21.3
74010 *	X-RAY EXAM OF ABDOMEN		9.6	15.2	1.7	26.5
74020 *	X-RAY EXAM OF ABDOMEN	PC	9.6	7.3	0.8	17.7
74020 *	X-RAY EXAM OF ABDOMEN		10.1	16.8	1.7	28.6
74022 *	X-RAY EXAM SERIES, ABDOMEN		13.4	19.3	2.0	34.7
74150 *	CAT SCAN OF ABDOMEN	PC	33.5	38.3	4.3	76.1
74150 *	CAT SCAN OF ABDOMEN		38.9	105.2	11.8	155.9

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
74160 *	CONTRAST CAT SCAN OF ABDOMEN	PC	36.5	42.5	4.8	83.8
74160 *	CONTRAST CAT SCAN OF ABDOMEN		47.5	125.3	14.0	186.8
74170 *	CONTRAST CAT SCANS, ABDOMEN	PC	42.0	48.0	5.4	95.4
74170 *	CONTRAST CAT SCANS, ABDOMEN		57.6	146.9	16.4	220.9
74210 *	CONTRAST XRAY EXAM OF THROAT		11.8	21.7	2.4	35.9
74220 *	CONTRAST XRAY EXAM,ESOPHAGUS		11.8	22.6	2.5	36.9
74230 *	CINEMA XRAY THROAT/ESOPHAGUS		11.0	25.6	2.9	39.5
74235 *	REMOVE ESOPHAGUS OBSTRUCTION		9.9	30.0	3.4	43.3
74240 *	X-RAY EXAM UPPER GI TRACT		16.5	33.5	3.6	53.6
74241 *	X-RAY EXAM UPPER GI TRACT		20.3	35.9	3.9	60.1
74245 *	X-RAY EXAM UPPER GI TRACT		20.6	43.5	4.7	68.8
74246 *	CONTRAST XRAY UPPER GI TRACT		19.2	39.3	4.3	62.8
74247 *	CONTRAST XRAY UPPER GI TRACT		24.4	44.4	4.9	73.7
74249 *	CONTRAST XRAY UPPER GI TRACT		23.3	50.3	5.6	79.2
74250 *	X-RAY EXAM OF SMALL BOWEL		17.6	26.7	2.9	47.2
74260 *	X-RAY EXAM OF SMALL BOWEL		19.2	28.3	3.1	47.5
74270 *	CONTRAST X-RAY EXAM OF COLON		27.7	31.6	3.5	62.8
74280 *	CONTRAST X-RAY EXAM OF COLON		36.8	39.4	4.4	80.6
74400 *	CONTRAST X-RAY URINARY TRACT		26.6	36.0	4.4	67.0
74405 *	CONTRAST X-RAY URINARY TRACT		28.3	42.1	5.0	75.4
74420 *	CONTRAST X-RAY URINARY TRACT		14.5	22.9	2.9	40.3
74425 *	CONTRAST X-RAY URINARY TRACT		17.3	15.7	2.1	35.1
74426 *	CONTRAST X-RAY URINARY TRACT		33.7	37.0	4.9	75.6
74430 *	CONTRAST X-RAY OF BLADDER		14.0	20.1	2.6	36.7
74431 *	CONTRAST X-RAY OF BLADDER		21.4	28.1	3.6	53.1
74440 *	XRAY EXAM MALE GENITAL TRACT		30.4	18.7	2.2	51.3
74450 *	X-RAY EXAM URETHRA/BLADDER		15.6	19.1	2.5	37.2
74451 *	X-RAY EXAM URETHRA/BLADDER		25.2	29.4	3.8	58.4
74455 *	X-RAY EXAM URETHRA/BLADDER		20.6	27.4	3.5	51.5
74456 *	X-RAY EXAM URETHRA/BLADDER		24.4	32.8	4.1	61.3
74470 *	X-RAY EXAM OF KIDNEY LESION		18.4	14.9	1.9	35.2
74471 *	X-RAY EXAM OF KIDNEY LESION		80.1	49.0	5.4	134.5
74475 *	XRAY CONTROL CATHETER INSERT		43.6	16.2	2.2	62.0
74476 *	XRAY CONTROL CATHETER INSERT		110.0	89.7	10.4	210.1
74480 *	XRAY CONTROL CATHETER INSERT		62.8	27.7	3.1	93.6
74481 *	XRAY CONTROL CATHETER INSERT		133.9	122.3	14.1	270.3
74710 *	X-RAY MEASUREMENT OF PELVIS		28.3	11.8	1.5	41.6
74720 *	X-RAY ABDOMEN		24.7	15.4	1.7	41.8
74741 *	X-RAY FEMALE GENITAL TRACT		37.0	41.4	6.2	84.6
75650 *	ARTERY X-RAYS, HEAD & NECK		61.2	27.2	3.1	91.5
75651 *	ARTERY X-RAYS, HEAD & NECK		144.8	222.1	24.9	391.8
75652 *	ARTERY X-RAYS, HEAD & NECK		48.0	49.6	8.9	106.5
75653 *	ARTERY X-RAYS, HEAD & NECK		117.7	135.1	15.4	268.2
75654 *	ARTERY X-RAYS, HEAD & NECK		76.5	62.2	7.3	146.0
75655 *	ARTERY X-RAYS, HEAD & NECK		181.6	204.6	23.5	409.7
75656 *	ARTERY X-RAYS, HEAD & NECK		106.4	60.2	6.9	173.5
75657 *	ARTERY X-RAYS, HEAD & NECK		189.5	157.7	18.0	365.2
75658 *	X-RAY EXAM OF ARM ARTERIES		54.6	49.2	7.8	111.6
75659 *	X-RAY EXAM OF ARM ARTERIES		116.0	54.8	6.4	177.2
75660 *	ARTERY X-RAYS, HEAD & NECK		49.1	61.5	7.2	117.8
75661 *	ARTERY X-RAYS, HEAD & NECK		117.4	78.2	9.4	205.0
75662 *	ARTERY X-RAYS, HEAD & NECK		56.2	18.7	2.2	77.1
75663 *	ARTERY X-RAYS, HEAD & NECK		158.0	119.8	20.7	298.5
75665 *	ARTERY X-RAYS, HEAD & NECK		46.9	30.3	5.2	82.4
75667 *	ARTERY X-RAYS, HEAD & NECK		114.1	98.3	11.0	223.4
75669 *	ARTERY X-RAYS, HEAD & NECK		122.6	170.7	20.7	314.0
75671 *	ARTERY X-RAYS, HEAD & NECK		65.6	55.4	6.4	127.4

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
75672 *	ARTERY X-RAYS, HEAD & NECK		143.7	136.8	13.8	294.3
75673 *	ARTERY X-RAYS, HEAD & NECK		182.4	233.4	28.9	444.7
75676 *	ARTERY X-RAYS, NECK		77.6	40.4	4.9	122.9
75677 *	ARTERY X-RAYS, NECK		78.7	65.5	10.6	154.8
75678 *	ARTERY X-RAYS, NECK		135.2	152.3	17.5	305.0
75680 *	ARTERY X-RAYS, NECK		62.5	111.1	12.4	186.0
75681 *	ARTERY X-RAYS, NECK		137.4	124.8	14.0	276.2
75682 *	ARTERY X-RAYS, NECK		176.9	205.1	23.1	405.1
75685 *	ARTERY X-RAYS, SPINE		56.0	29.8	3.3	89.1
75687 *	ARTERY X-RAYS, SPINE		128.6	84.7	9.5	222.8
75690 *	ARTERY X-RAYS, NECK SPINE		75.4	33.9	3.8	113.1
75692 *	ARTERY X-RAYS, NECK SPINE		110.0	86.2	9.0	205.2
75695 *	ARTERY X-RAYS, NECK SPINE		61.7	64.5	7.2	133.4
75697 *	ARTERY X-RAYS, NECK SPINE		151.7	113.8	12.8	278.3
75705 *	ARTERY X-RAYS, SPINE		32.1	40.3	4.6	77.0
75710 *	ARTERY X-RAYS, ARM/LEG		37.9	36.0	6.3	80.2
75711 *	ARTERY X-RAYS, ARM/LEG		100.4	72.2	10.9	183.5
75712 *	ARTERY X-RAYS, ARM/LEG		110.3	121.9	16.1	248.3
75716 *	ARTERY X-RAYS, ARMS/LEGS		60.6	40.8	7.5	108.9
75717 *	ARTERY X-RAYS, ARMS/LEGS		133.9	85.2	10.2	229.3
75718 *	ARTERY X-RAYS, ARMS/LEGS		141.5	107.1	12.3	260.9
75722 *	ARTERY X-RAYS, KIDNEY		63.4	43.3	6.3	113.0
75723 *	ARTERY X-RAYS, KIDNEY		152.0	134.2	15.0	301.2
75724 *	ARTERY X-RAYS, KIDNEYS		60.9	39.3	4.4	104.6
75725 *	ARTERY X-RAYS, KIDNEYS		176.4	149.1	16.7	342.2
75726 *	ARTERY X-RAYS, ABDOMEN		59.2	35.2	4.1	98.5
75727 *	ARTERY X-RAYS, ABDOMEN		158.5	153.6	17.1	329.2
75728 *	ARTERY X-RAYS, ABDOMEN		161.8	118.2	13.3	293.3
75736 *	ARTERY X-RAYS, PELVIS		57.9	28.3	3.1	89.3
75737 *	ARTERY X-RAYS, PELVIS		116.8	92.9	12.1	221.8
75741 *	ARTERY X-RAYS, LUNG		40.3	25.9	2.7	68.9
75742 *	ARTERY X-RAYS, LUNG		142.4	103.6	12.7	258.7
75743 *	ARTERY X-RAYS, LUNGS		53.2	41.9	4.6	99.7
75744 *	ARTERY X-RAYS, LUNGS		172.3	161.9	17.4	351.6
75746 *	ARTERY X-RAYS, LUNG		45.5	12.9	1.6	60.0
75747 *	ARTERY X-RAYS, LUNG		110.8	124.7	14.0	249.5
75750 *	ARTERY X-RAYS, HEART		61.7	36.1	3.6	101.4
75751 *	ARTERY X-RAYS, HEART		48.0	37.7	3.2	88.9
75752 *	ARTERY X-RAYS, HEART		48.3	36.5	4.3	89.1
75753 *	ARTERY X-RAYS, HEART		119.0	70.9	6.2	196.1
75754 *	ARTERY X-RAYS, HEART		74.3	43.0	4.7	122.0
75755 *	ARTERY X-RAYS, HEART		150.3	99.1	10.4	259.8
75757 *	ARTERY X-RAYS, CHEST		60.1	34.9	4.2	99.2
75762 *	CORONARY BYPASS X-RAY		75.7	34.2	3.6	113.5
75764 *	CORONARY BYPASS X-RAY		57.1	52.1	6.1	115.3
75766 *	CORONARY BYPASS X-RAY		90.5	31.8	3.1	125.4
75767 *	CORONARY BYPASS X-RAY		103.7	160.8	13.3	277.8
75772 *	CORONARY BYPASS X-RAY		46.6	17.4	2.9	66.9
75774 *	ARTERY X-RAY, EACH VESSEL		34.6	16.6	1.9	53.1
75775 *	ARTERY X-RAY, EACH VESSEL		55.1	39.1	4.7	98.9
75790 *	VISUALIZE A-V SHUNT		66.7	94.4	20.5	181.6
75820 *	VEIN X-RAY, ARM/LEG		22.2	31.7	3.6	57.5
75821 *	VEIN X-RAY, ARM/LEG		42.5	53.7	6.0	102.2
75822 *	VEIN X-RAY, ARMS/LEGS		24.7	46.0	5.2	75.9
75823 *	VEIN X-RAY, ARMS/LEGS		51.3	71.0	7.7	130.0
75825 *	VEIN X-RAY, TRUNK		34.3	25.9	2.8	63.0
75826 *	VEIN X-RAY, TRUNK		79.5	88.9	9.7	178.1

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HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
75827 *	VEIN X-RAY, CHEST		35.4	31.9	3.6	70.9
75828 *	VEIN X-RAY, CHEST		76.8	77.3	8.7	162.8
75832 *	VEIN X-RAY, KIDNEY		75.7	71.5	8.4	155.6
75834 *	VEIN X-RAYS, KIDNEYS		95.7	99.6	10.7	206.0
76087 *	X-RAY OF MAMMARY DUCT		45.3	40.7	4.7	90.7
76088 *	X-RAY OF MAMMARY DUCTS		29.3	34.1	3.8	67.2
76089 *	X-RAY OF MAMMARY DUCTS		12.6	54.1	5.7	72.4
76090 *	X-RAY EXAM OF BREAST	PC	13.2	8.5	1.0	22.7
76090 *	X-RAY EXAM OF BREAST		22.8	21.7	2.5	47.0
76091 *	X-RAY EXAM OF BREASTS	PC	18.1	11.4	1.3	30.8
76091 *	X-RAY EXAM OF BREASTS		34.0	29.6	3.4	67.0
76355 *	CAT SCAN FOR LOCALIZATION		49.9	62.7	6.3	118.9
76360 *	CAT SCAN FOR NEEDLE BIOPSY		45.0	46.5	5.4	96.9
76361 *	CAT SCAN FOR NEEDLE BIOPSY		82.0	101.2	11.4	194.6
76365 *	CAT SCAN FOR CYST ASPIRATION		35.4	24.6	2.7	62.7
76366 *	CAT SCAN FOR CYST ASPIRATION		74.1	89.3	10.0	173.4
76370 *	CAT SCAN FOR THERAPY GUIDE		37.9	60.7	6.7	105.3
76375 *	CAT SCANS, OTHER PLANES		36.8	40.8	4.6	82.2
76500 *	ECHO EXAM OF HEAD		12.6	16.4	2.1	31.1
76506 *	ECHO EXAM OF HEAD		24.1	53.8	5.7	83.6
76511 *	ECHO EXAM OF EYE		20.0	57.1	4.8	81.9
76512 *	ECHO EXAM OF EYE		26.6	70.7	5.9	103.2
76516 *	ECHO EXAM OF EYE		19.2	65.1	5.5	89.8
76519 *	ECHO EXAM OF EYE		20.3	65.5	5.5	91.3
76529 *	ECHO EXAM OF EYE		15.4	55.4	4.7	75.5
76700 *	ECHO EXAM OF ABDOMEN		40.3	52.6	5.8	98.7
76705 *	ECHO EXAM OF ABDOMEN		29.1	37.8	4.2	71.1
76770 *	ECHO EXAM ABDOMEN BACK WALL		36.2	48.2	5.7	90.1
76775 *	ECHO EXAM ABDOMEN BACK WALL		29.3	38.5	4.6	72.4
76805 *	ECHO EXAM OF PREGNANT UTERUS		45.5	42.1	6.1	93.7
76815 *	ECHO EXAM OF PREGNANT UTERUS		32.1	26.2	5.0	63.3
76825 *	ECHO EXAM OF FETAL HEART		72.1	21.6	3.8	97.5
76855 *	ECHO EXAM OF PELVIS		49.4	43.5	5.7	98.6
76856 *	ECHO EXAM OF PELVIS		53.2	48.1	6.2	107.5
76857 *	ECHO EXAM OF PELVIS		48.8	29.7	4.1	82.6
77400 *	DAILY RADIATION THERAPY		24.1	21.3	2.2	47.6
77405 *	DAILY RADIATION THERAPY		28.3	28.9	3.2	60.4
77410 *	DAILY RADIATION THERAPY		36.8	35.0	3.9	75.7
77415 *	PORT VERIFICATION FILMS		15.1	9.7	1.1	25.9
77420 *	WEEKLY RADIATION THERAPY		47.5	45.5	4.6	97.6
77425 *	WEEKLY RADIATION THERAPY		90.2	71.9	7.9	170.0
77430 *	WEEKLY RADIATION THERAPY		95.2	65.3	7.3	167.8
77465 *	DAILY KILOVOLTAGE TREATMENT		19.2	15.3	1.1	35.6
77470 *	SPECIAL RADIATION TREATMENT		35.7	36.1	3.4	75.2
77750 *	INFUSE RADIOACTIVE MATERIALS		52.9	35.1	3.8	91.8
77761 *	RADIOELEMENT APPLICATION		57.6	60.3	6.8	124.7
77762 *	RADIOELEMENT APPLICATION		104.0	143.7	17.2	264.9
77763 *	RADIOELEMENT APPLICATION		114.9	199.4	24.9	339.2
77776 *	RADIOELEMENT APPLICATION		76.5	103.6	7.3	187.4
77777 *	RADIOELEMENT APPLICATION		161.3	129.5	9.3	300.1
77778 *	RADIOELEMENT APPLICATION		206.5	310.4	34.8	551.7
77789 *	RADIOELEMENT APPLICATION		14.3	21.7	2.0	38.0
77790 *	RADIOELEMENT HANDLING		27.2	43.4	4.8	75.4
78300 *	NUCLEAR SCAN OF BONE		14.5	43.2	4.9	62.6
78305 *	NUCLEAR SCAN OF BONES	PC	14.5	24.7	2.7	41.9
78305 *	NUCLEAR SCAN OF BONES		17.8	64.7	6.9	89.4
78306 *	NUCLEAR SCAN OF SKELETON	PC	15.6	26.3	2.9	44.8

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
78306 *	NUCLEAR SCAN OF SKELETON		20.3	70.8	7.8	98.9
78310 *	BONE BLOOD FLOW SCAN	PC	10.4	17.3	1.9	29.6
78310 *	BONE BLOOD FLOW SCAN		14.8	29.2	3.2	47.2
78315 *	NUCLEAR SCAN OF BONE		10.1	81.9	8.9	100.9
78350 *	BONE MINERAL CONTENT STUDY	PC	11.8	12.7	1.3	25.8
78350 *	BONE MINERAL CONTENT STUDY		20.8	37.3	4.2	62.3
78351 *	BONE MINERAL CONTENT STUDY	PC	11.2	18.3	2.1	31.6
78351 *	BONE MINERAL CONTENT STUDY		20.8	52.5	7.5	80.8
78380 *	NUCLEAR SCAN OF JOINT	PC	12.6	16.2	1.7	30.5
78380 *	NUCLEAR SCAN OF JOINT		15.1	38.5	3.6	57.2
78381 *	NUCLEAR SCAN OF JOINTS	PC	14.3	20.9	2.3	37.5
78381 *	NUCLEAR SCAN OF JOINTS		19.5	65.2	8.0	92.7
80500	LAB PATHOLOGY CONSULTATION		10.7	6.9	0.5	18.1
80502	LAB PATHOLOGY CONSULTATION		32.6	12.4	1.0	46.0
85095	BONE MARROW ASPIRATION		40.9	21.0	1.7	63.6
85097	BONE MARROW INTERPRETATION		35.7	15.0	1.2	51.8
85100	BONE MARROW EXAMINATION		55.4	33.7	2.7	91.8
85101	ASPIRATE, STAIN BONE MARROW		38.4	22.5	1.8	62.7
85102	BONE MARROW BIOPSY		46.9	26.7	2.2	75.8
88104	CYTOPATHOLOGY		20.8	7.2	0.6	28.6
88125	FORENSIC CYTOPATHOLOGY		8.0	6.0	0.5	14.5
88130	SEX CHROMATIN IDENTIFICATION		12.6	4.6	0.4	17.6
88162	CYTOPATHOLOGY, EXTENSIVE		25.8	12.6	1.0	39.4
88170	FINE NEEDLE ASPIRATION		36.5	20.0	2.5	59.0
88171	FINE NEEDLE ASPIRATION		44.7	23.8	2.1	70.6
88172	EVALUATION OF SMEAR		33.7	10.7	0.9	45.3
88173	INTERPRETATION OF SMEAR		34.8	14.5	1.2	50.5
88300	SURG, PATH, GROSS		1.9	3.8	0.3	6.0
88302	SURG PATH, GROSS AND MICRO		3.3	8.8	0.7	12.8
88304	SURG PATH, GROSS AND MICRO		6.9	12.1	0.8	19.8
88305	SURG PATH, GROSS AND MICRO		28.8	18.2	1.4	48.4
88307	SURG PATH, GROSS AND MICRO		35.1	25.2	1.9	62.2
88309	SURG PATH, GROSS AND MICRO		72.7	33.8	2.7	109.2
88321	MICROSLIDE CONSULTATION		26.1	12.9	0.9	39.9
88323	MICROSLIDE CONSULTATION		22.5	12.3	0.8	35.6
88325	COMPREHENSIVE REVIEW OF DATA		26.1	14.7	1.1	41.9
88329	CONSULTATION DURING SURGERY		33.5	11.5	0.9	45.9
88331	CONSULTATION DURING SURGERY		40.9	19.6	1.5	62.0
88332	CONSULTATION DURING SURGERY		23.0	10.5	0.8	34.3
88348	ELECTRON MICROSCOPY		78.4	39.9	3.3	121.6
90000	OFFICE/OP VISIT, NEW, BRIEF		12.9	10.7	1.3	24.9
90010	OFFICE/OP VISIT, NEW, LTD		16.7	13.0	1.6	31.3
90015	OFFICE/OP VISIT, NEW, INTERM		20.6	15.4	2.0	38.0
90017	OFFICE/OP VISIT, NEW, EXTEND		28.3	17.2	2.3	47.8
90020	OFFICE/OP VISIT, NEW, COMPRH		35.9	22.9	3.0	61.8
90030	OFFICE/OP VISIT, EST, MINIM		6.3	5.3	0.5	12.1
90040	OFFICE/OP VISIT, EST, BRIEF		12.9	7.7	0.8	21.4
90050	OFFICE/OP VISIT, EST, LTD		16.7	8.9	0.9	26.5
90060	OFFICE/OP VISIT, EST, INTERM		20.6	10.7	1.1	32.4
90070	OFFICE/OP VISIT, EST, EXTEND		28.3	13.6	1.4	43.3
90080	OFFICE/OP VISIT, EST, COMPRH		35.9	20.2	2.2	58.3
90200	HOSPITAL CARE, NEW, BRIEF		20.0	20.9	2.3	43.2
90215	HOSPITAL CARE,NEW, INTERMED.		33.7	26.4	2.7	62.8
90220	HOSPITAL CARE, NEW, COMPREH.		60.9	32.7	3.3	96.9
90225	HOSPITAL CARE, NEW, NEWBORN		60.9	14.4	2.1	77.4
90240	HOSPITAL VISIT, BRIEF		15.4	9.0	0.9	25.3
90250	HOSPITAL VISIT, LIMITED		20.0	10.8	1.0	31.8

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Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
90260	HOSPITAL VISIT, INTERMEDIATE		24.4	12.2	1.1	37.7
90270	HOSPITAL VISIT, EXTENDED		33.7	15.7	1.5	50.9
90280	HOSPITAL VISIT,COMPREHENSIVE		42.8	16.4	1.6	60.8
90282	NORMAL NEWBORN CARE,HOSPITAL		24.4	11.0	1.1	36.5
90300	CARE FACILITY VISIT, BRIEF		17.6	12.5	1.2	31.3
90315	CARE FACILITY VISIT,INTERMED		29.9	15.2	1.4	46.5
90320	CARE FACILITY VISIT, COMPRH.		54.0	24.2	2.1	80.3
90340	CARE FACILITY VISIT, BRIEF		13.7	8.7	0.8	23.2
90350	CARE FACILITY VISIT, LIMITED		17.6	10.0	0.9	28.5
90360	CARE FACILITY VISIT,INTERMED		21.7	11.2	1.0	33.9
90370	CARE FACILITY VISIT, EXTEND.		29.9	14.2	1.3	45.4
90600	LIMITED CONSULTATION		19.2	21.0	3.1	43.3
90605	INTERMEDIATE CONSULTATION		32.4	22.0	3.0	57.4
90610	EXTENDED CONSULTATION		45.5	27.7	3.9	77.1
90620	COMPREHENSIVE CONSULTATION		58.7	36.0	4.5	99.2
90630	COMPLEX CONSULTATION		72.1	47.2	5.7	125.0
90640	BRIEF FOLLOW-UP CONSULT		14.5	9.3	1.0	24.8
90641	LIMITED FOLLOW-UP CONSULT		19.2	11.7	1.2	32.1
90642	INTERMEDIAT FOLLOWUP CONSULT		23.6	14.8	1.4	39.8
90643	COMPLEX FOLLOW-UP CONSULT		72.1	20.5	2.0	94.6
90750	PREVENTIVE MEDICINE, ADULT		28.3	14.1	1.9	44.3
90752	PREVENTIVE MEDICINE, 5-11		24.4	2.9	0.3	27.6
90760	PREVENTIVE MEDICINE, ADULT		28.3	13.9	1.6	43.8
90761	PREVENTIVE MEDICINE, 12-17		28.3	19.2	2.6	50.1
90762	PREVENTIVE MEDICINE, 5-11		20.6	7.0	0.6	28.2
90825	EVALUATION OF TESTS/RECORDS		61.2	9.6	1.1	71.9
90831	TELEPHONE CONSULTATION		20.6	5.9	0.7	27.2
90835	SPECIAL INTERVIEW		42.5	10.2	1.2	53.9
90847	SPECIAL FAMILY THERAPY		69.7	9.5	1.1	80.3
90849	SPECIAL FAMILY THERAPY		85.6	3.8	0.4	89.8
90880	MEDICAL HYPNOTHERAPY		68.6	12.9	1.3	82.8
90887	CONSULTATION WITH FAMILY		44.4	8.1	0.9	53.4
92004	NEW EYE EXAM & TREATMENT		27.2	19.1	1.6	47.9
92012	EYE EXAM & TREATMENT		14.5	13.6	1.1	29.2
92014	EYE EXAM & TREATMENT		17.6	17.8	1.5	36.9
92020	SPECIAL EYE EVALUATION		10.1	9.0	0.8	19.9
92060	SPECIAL EYE EVALUATION		12.3	12.1	1.1	25.5
92065	ORTHOPTIC/PLEOPTIC TRAINING		8.5	8.8	0.7	18.0
92070	FITTING OF CONTACT LENS		35.9	46.9	4.0	86.8
92081	VISUAL FIELD EXAMINATION(S)		10.7	10.6	0.9	22.2
92082	VISUAL FIELD EXAMINATION(S)		14.5	15.9	1.3	31.7
92083	VISUAL FIELD EXAMINATION(S)		22.2	26.7	2.2	51.1
92100	SERIAL TONOMETRY EXAM(S)		7.7	8.8	0.7	17.2
92120	TONOGRAPHY & EYE EVALUATION		9.1	9.4	0.8	19.3
92130	WATER PROVOCATION TONOGRAPHY		15.4	15.2	1.3	31.9
92140	GLAUCOMA PROVOCATIVE TESTS		8.2	9.0	0.8	18.0
92225	EXTENDED OPHTHALMOSCOPY, NEW		12.6	14.0	1.2	27.8
92230	OPHTHALMOSCOPY/ANGIOSCOPY		23.6	23.2	2.0	48.8
92235	OPHTHALMOSCOPY/ANGIOGRAPHY		47.7	56.2	4.7	108.6
92250	OPHTHALMOSCOPY; FUNDUS PHOTO		6.9	11.0	0.9	18.8
92260	OPHTHALMOSCOPY/DYNAMOMETRY		9.6	16.5	1.4	27.5
92270	ELECTRO-OCULOGRAPHY		5.8	21.3	2.1	29.2
92275	ELECTRORETINOGRAPHY		10.7	40.4	3.4	54.5
92280	SPECIAL EYE EVALUATION		10.7	32.7	2.8	46.2
92283	COLOR VISION EXAMINATION		3.6	10.8	0.9	15.3
92284	DARK ADAPTATION EYE EXAM		6.3	17.9	1.5	25.7
92285	EYE PHOTOGRAPHY		5.5	11.3	0.9	17.7
92286	INTERNAL EYE PHOTOGRAPHY		14.8	46.8	3.9	65.5
92287	INTERNAL EYE PHOTOGRAPHY		17.3	43.9	3.7	64.9
92502	EAR AND THROAT EXAMINATION		28.0	27.1	4.2	59.3

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
92504	EAR MICROSCOPY EXAMINATION		11.5	9.5	1.2	22.2
92506	SPEECH & HEARING EVALUATION		24.4	12.7	1.9	39.0
92507	SPEECH/HEARING THERAPY		19.2	11.3	1.6	32.1
92508	SPEECH/HEARING THERAPY		18.1	3.5	0.4	22.0
92511	NASOPHARYNGOSCOPY		48.8	25.8	4.2	78.8
92512	NASAL FUNCTION STUDIES		24.4	15.1	2.0	41.5
92516	FACIAL NERVE FUNCTION TEST		20.8	12.4	2.1	35.3
92520	LARYNGEAL FUNCTION STUDIES		35.9	16.1	2.4	54.4
92541	SPONTANEOUS NYSTAGMUS TEST		22.8	18.0	2.9	43.7
92542	POSITIONAL NYSTAGMUS TEST		13.7	11.2	1.8	26.7
92543	CALORIC VESTIBULAR TEST		18.4	14.9	2.4	35.7
92544	OPTOKINETIC NYSTAGMUS TEST		10.1	8.6	1.4	20.1
92545	OSCILLATING TRACKING TEST		9.3	8.0	1.3	18.6
92546	TORSION SWING RECORDING		13.4	8.6	1.4	23.4
92547	SUPPLEMENTAL ELECTRICAL TEST		12.9	9.9	1.6	24.4
92551	PURE TONE HEARING TEST, AIR		3.6	6.0	0.7	10.3
92552	PURE TONE AUDIOMETRY, AIR		3.6	6.6	1.0	11.2
92553	AUDIOMETRY, AIR & BONE		4.9	9.7	1.6	16.2
92555	SPEECH THRESHOLD AUDIOMETRY		3.3	5.6	0.9	9.8
92556	SPEECH AUDIOMETRY, COMPLETE		4.7	8.4	1.4	14.5
92557	COMPREHENSIVE AUDIOMETRY		9.1	17.5	2.9	29.5
92559	GROUP AUDIOMETRIC TESTING		11.2	31.8	5.1	48.1
92560	BEKESY AUDIOMETRY, SCREEN		5.8	7.7	0.8	14.3
92561	BEKESY AUDIOMETRY, DIAGNOSIS		7.1	10.8	1.4	19.3
92562	LOUDNESS BALANCE TEST		3.6	5.4	0.8	9.8
92563	TONE DECAY HEARING TEST		4.9	6.1	1.0	12.0
92564	SISI HEARING TEST		4.1	5.4	0.9	10.4
92565	STENGER TEST, PURE TONE		3.0	5.4	0.8	9.2
92566	IMPEDANCE HEARING TEST		4.9	9.1	1.5	15.5
92567	TYMPANOMETRY		3.8	7.2	1.1	12.1
92568	ACOUSTIC REFLEX TESTING		3.6	5.1	0.8	9.5
92569	ACOUSTIC REFLEX DECAY TEST		4.1	6.2	1.0	11.3
92571	FILTERED SPEECH HEARING TEST		3.8	6.0	1.0	10.8
92572	STAGGERED SPONDAIC WORD TEST		1.1	4.3	0.6	6.0
92575	SENSORINEURAL ACUITY TEST		3.8	5.3	0.9	10.0
92576	SYNTHETIC SENTENCE TEST		3.0	5.2	0.9	9.1
92577	STENGER TEST, SPEECH		8.5	10.0	1.5	20.0
92580	ELECTRODERMAL AUDIOMETRY		8.8	9.1	1.3	19.2
92581	EVOKED RESPONSE AUDIOMETRY		19.7	60.2	8.8	86.7
92582	CONDITIONING PLAY AUDIOMETRY		8.8	9.1	1.3	19.2
92584	ELECTROCOCHLEOGRAPHY		28.8	32.1	4.9	65.8
92585	BRAINSTEM EVOKED AUDIOMETRY		27.7	50.6	8.0	86.3
92589	AUDITORY FUNCTION TEST(S)		7.7	7.7	1.2	16.6
92590	HEARING AID EXAM, ONE EAR		17.6	27.8	4.3	49.7
92591	HEARING AID EXAM, BOTH EARS		17.0	105.3	14.9	137.2
92592	HEARING AID CHECK, ONE EAR		7.1	9.5	1.5	18.1
92593	HEARING AID CHECK, BOTH EARS		6.0	3.3	0.5	11.8
92594	ELECTRO HEARING AID TEST,ONE		6.3	3.4	0.6	10.3
92595	ELECTRO HEARINGAID TEST,BOTH		6.9	1.6	0.3	8.8
92596	EAR PROTECTOR EVALUATION		9.3	9.3	1.5	20.1
93000	ELECTROCARDIOGRAM, COMPLETE		7.7	14.7	1.3	23.7
93005	ELECTROCARDIOGRAM, TRACING		3.3	9.9	1.0	14.2
93010	ELECTROCARDIOGRAM REPORT		3.3	6.1	0.5	9.9
93012	TRANSMISSION OF ECG		7.1	14.4	1.4	22.9
93014	REPORT ON TRANSMITTED ECG		6.0	7.6	0.7	14.3
93018	CARDIOVASCULAR STRESS TEST		17.8	29.0	2.4	49.2
93024	CARDIAC DRUG STRESS TEST		15.1	46.8	3.9	65.8
93040	RHYTHM ECG WITH REPORT		4.4	6.4	0.6	11.4
93041	RHYTHM ECG, TRACING		3.8	4.8	0.4	9.0
93042	RHYTHM ECG, REPORT		3.3	4.3	0.4	8.0

Model Fee Schedule: Initial Estimates of Relative Value Units (RVU) (Work, Overhead, Malpractice and Total) for Harvard Phase I Procedures 1/

HCPCS	DESCRIPTION	MODIFIER	WORK RVU	OVERHEAD RVU	MALPRACTICE RVU	TOTAL RVU
93045	RHYTHM ECG		4.4	11.1	0.9	16.4
93201	PHONOCARDIOGRAM & ECG LEAD		9.3	17.4	1.8	28.5
93202	PHONOCARDIOGRAM & ECG LEAD		5.5	7.9	0.7	14.1
93204	PHONOCARDIOGRAM & ECG LEAD		5.5	5.5	0.5	11.5
93205	SPECIAL PHONOCARDIOGRAM		18.7	41.5	3.9	64.1
93209	SPECIAL PHONOCARDIOGRAM		17.8	15.2	2.0	35.0
93210	INTRACARDIAC PHONOCARDIOGRAM		8.0	15.3	1.4	24.7
93220	VECTORCARDIOGRAM		15.6	15.6	1.3	32.5
93222	VECTORCARDIOGRAM REPORT		8.8	17.3	1.4	27.5
93240	BALLISTOCARDIOGRAM		10.7	8.2	0.7	19.6
93255	APEXCARDIOGRAPHY		8.2	6.1	1.4	15.7
93259	ELECTROCARDIOGRAM MONITORING		21.9	34.1	2.9	58.9
93262	ELECTROCARDIOGRAM MONITORING		42.2	82.5	7.0	131.7
93263	ELECTROCARDIOGRAM MONITORING		32.9	72.7	6.1	111.7
93266	ELECTROCARDIOGRAM MONITORING		38.4	62.7	5.2	106.3
93268	ECG RECORD/REVIEW		11.0	14.9	1.4	27.3
93501	RIGHT HEART CATHETERIZATION		85.9	162.9	18.1	266.9
93503	INSERT/PLACE HEART CATHETER		66.9	117.4	15.6	199.9
93505	BIOPSY OF HEART LINING		74.6	120.7	20.5	215.8
93510	LEFT HEART CATHETERIZATION		91.3	150.1	13.0	254.4
93511	LEFT HEART CATHETERIZATION		90.5	120.3	10.4	221.2
93524	LEFT HEART CATHETERIZATION		94.1	133.5	13.2	240.8
93526	RT & LT HEART CATHETERS		132.2	239.2	20.1	391.5
93527	RT & LT HEART CATHETERS		169.0	223.9	19.9	412.8
93528	RT & LT HEART CATHETERS		173.6	181.2	24.1	378.9
93535	INSERTION/REMOVE CATHETER		180.8	202.5	44.1	427.4
93536	INSERT CIRCULATION ASSIST		121.2	246.4	47.2	414.8
94010	BREATHING CAPACITY TEST		15.6	13.7	1.2	30.5
94070	BRONCHOSPASM EVALUATION		28.5	29.3	2.6	60.4
94620	PULMONARY STRESS TESTING		28.3	23.3	2.0	53.6
94650	PRESSURE BREATHING (IPPB)		8.0	5.8	0.5	14.3
94651	PRESSURE BREATHING (IPPB)		6.9	4.8	0.4	12.1
94652	PRESSURE BREATHING (IPPB)		2.2	6.0	0.5	8.7
94656	INITIAL VENTILATION ASSIST		44.2	37.5	3.4	85.1
94657	CONTINUED VENTILATION ASSIST		27.4	22.5	2.0	51.9
94660	POS AIRWAY PRESSURE, CPAP		26.6	21.2	1.9	49.7
94662	NEG PRESSURE VENTILATION,CNP		20.3	9.7	0.9	30.9
94664	AEROSOL OR VAPOR INHALATIONS		8.8	8.2	0.7	17.7
95027	SKIN END POINT TITRATION		44.4	4.5	0.7	49.6
95065*	NOSE ALLERGY TEST		20.6	3.2	0.3	24.1
95070	BRONCHIAL ALLERGY TESTS		66.9	13.3	1.4	81.6
95071	BRONCHIAL ALLERGY TESTS		33.7	3.0	0.3	37.0
95078	PROVOCATIVE TESTING		35.1	6.1	0.8	42.0
96900	ULTRAVIOLET LIGHT THERAPY		9.6	5.5	0.3	15.4
96910	PHOTOCHEMOTHERAPY WITH UV-B		14.8	8.8	0.4	24.0
96912	PHOTOCHEMOTHERAPY WITH UV-A		17.0	9.9	0.5	27.4
99013	TELEPHONE CONSULTATION		10.7	1.8	0.2	12.7
99014	TELEPHONE CONSULTATION		15.4	3.6	0.3	19.3
99015	TELEPHONE CONSULTATION		20.0	6.5	0.5	27.0
99065	EMERGENCY CARE SERVICES		60.9	10.2	1.1	72.2
99152	NEWBORN RESUSCITATION		78.2	23.3	1.9	103.4
99155	MEDICAL CONFERENCE		24.4	14.9	1.4	40.7
99156	MEDICAL CONFERENCE		43.6	23.5	2.3	69.4
99160	CRITICAL CARE, EACH HOUR		60.9	40.3	3.6	104.8
99162	CRITICAL CARE, ADDED 30 MIN		33.7	17.9	1.7	53.3

ADDENDUM C

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
510	5	BIRMINGHAM, AL	0.981	0.913	0.826
510	4	MOBILE, AL	0.964	0.911	0.826
510	2	NORTH CENTRAL AL	0.970	0.867	0.826
510	1	NORTHWEST AL	0.985	0.869	0.826
510	6	RURAL AL	0.975	0.851	0.826
510	3	SOUTHEAST AL	0.972	0.869	0.819
1020	1	ALASKA	1.106	1.255	1.045
1030	5	FLAGSTAFF (CITY), AZ	0.983	0.911	1.258
1030	1	PHOENIX (CITY), AZ	1.003	1.016	1.258
1030	7	PRESCOTT (CITY), AZ	0.983	0.911	1.258
1030	99	RURAL ARIZONA	0.987	0.943	1.258
1030	2	TUCSON (CITY), AZ	0.987	0.989	1.258
1030	8	YUMA (CITY), AZ	0.983	0.911	1.258
520	13	ARKANSAS	0.960	0.856	0.309
2050	26	ANAHEIM-SANTA ANA, CA	1.046	1.220	1.374
542	14	BAKERSFIELD, CA	1.028	1.050	1.374
542	11	FRESNO/MADERA, CA	1.006	1.009	1.374
542	13	KINGS/TULARE, CA	0.999	1.001	1.374
2050	18	LOS ANGELES, CA (1ST OF 8)	1.060	1.196	1.374
2050	19	LOS ANGELES, CA (2ND OF 8)	1.060	1.196	1.374
2050	20	LOS ANGELES, CA (3RD OF 8)	1.060	1.196	1.374
2050	21	LOS ANGELES, CA (4TH OF 8)	1.060	1.196	1.374
2050	22	LOS ANGELES, CA (5TH OF 8)	1.060	1.196	1.374
2050	23	LOS ANGELES, CA (6TH OF 8)	1.060	1.196	1.374
2050	24	LOS ANGELES, CA (7TH OF 8)	1.060	1.196	1.374
2050	25	LOS ANGELES, CA (8TH OF 8)	1.060	1.196	1.374
542	3	MARIN/NAPA/SOLANO, CA	1.012	1.198	1.374
542	10	MERCED/SURR. CNTYS, CA	1.018	1.009	1.374
542	12	MONTEREY/SANTA CRUZ, CA	1.023	1.108	1.374
542	1	N. COASTAL CNTYS, CA	1.003	1.072	1.374
542	2	NE RURAL CA	1.001	0.990	1.374
542	7	OAKLAND-BERKELEY, CA	1.028	1.258	1.374
542	27	RIVERSIDE, CA	1.026	1.080	1.374
542	4	SACRAMENTO/SURR. CNTYS, CA	1.026	1.088	1.374
542	15	SAN BERNADINO/E.CENTRAL CA	1.025	1.077	1.374
2050	28	SAN DIEGO/IMPERIAL, CA	1.026	1.090	1.374
542	5	SAN FRANCISCO, CA	1.038	1.303	1.374
542	6	SAN MATEO, CA	1.038	1.303	1.374
2050	16	SANTA BARBARA, CA	1.012	1.073	1.374
542	9	SANTA CLARA, CA	1.048	1.286	1.374
542	8	STOCKTON/SURR. CNTYS, CA	1.019	1.027	1.374
2050	17	VENTURA, CA	1.034	1.132	1.374
550	1	COLORADO	0.999	0.988	0.685

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
10230	4	EASTERN CONN.	0.999	1.053	1.056
10230	1	NW AND N.CENTRAL CONN.	1.002	1.071	1.030
10230	3	SOUTH CENTRAL CONN.	1.018	1.103	1.190
10230	2	SW CONNECTICUT	1.053	1.139	1.234
570	1	DELAWARE	1.026	1.018	0.665
580	1	D.C. + MD/VA SUBURBS	1.059	1.168	0.924
590	3	FORT LAUDERDALE, FL	0.993	0.981	1.380
590	4	MIAMI, FL	1.034	1.025	1.645
590	2	N/NC FLORIDA CITIES	0.975	0.932	1.110
590	1	RURAL FLORIDA	0.966	0.871	1.110
1040	1	ATLANTA, GA	0.975	1.022	0.753
1040	4	RURAL GEORGIA	0.956	0.841	0.751
1040	2	SMALL GA CITIES 02	0.962	0.895	0.753
1040	3	SMALL GA CITIES 03	0.961	0.869	0.719
1120	1	HAWAII	1.003	1.094	1.028
5130	12	NORTH IDAHO	0.965	0.917	0.891
5130	11	SOUTH IDAHO	0.967	0.936	0.891
621	10	CHAMPAIGN-URBANA, IL	0.965	0.920	1.140
621	16	CHICAGO, IL	1.044	1.114	1.778
621	3	DE KALB, IL	0.978	0.925	1.140
621	11	DECATUR, IL	0.981	0.927	1.140
621	12	EAST ST. LOUIS, IL	0.989	0.958	1.360
621	6	KANKAKEE, IL	0.972	0.925	1.140
621	8	NORMAL, IL	0.997	0.968	1.140
621	1	NORTHWEST, IL	0.974	0.896	1.140
621	5	PEORIA, IL	1.009	1.031	1.140
621	7	QUINCY, IL	0.974	0.896	1.140
621	4	ROCK ISLAND, IL	0.995	0.958	0.832
621	2	ROCKFORD, IL	1.010	1.018	1.361
621	13	SOUTHEAST IL	0.974	0.896	1.140
621	14	SOUTHERN IL	0.974	0.896	1.140
621	9	SPRINGFIELD, IL	0.996	0.966	1.140
621	15	SUBURBAN CHICAGO, IL	1.020	1.097	1.387
630	1	METROPOLITAN INDIANA	0.998	0.963	0.556
630	3	RURAL INDIANA	0.979	0.896	0.529
630	2	URBAN INDIANA	0.980	0.905	0.531
640	5	DES MOINES(POLK/WARREN),IA	0.997	0.966	0.667
640	8	IOWA CITY (CITY LIMITS)	0.960	0.967	0.667
640	3	NORTH CENTRAL IOWA	0.971	0.916	0.667
640	2	NORTHEAST IOWA	0.972	0.918	0.667
640	6	NORTHWEST IOWA	0.969	0.890	0.667
640	4	S.CEN. IA(EXCL DES MOINES)	0.962	0.881	0.667
640	1	SE IOWA (EXCL IOWA CITY)	0.978	0.929	0.667
640	7	SOUTHWEST IOWA	0.968	0.900	0.616
740	5	KANSAS CITY, KA	0.978	0.964	1.181
650	1	RURAL KANSAS	0.953	0.893	0.775
740	4	SUBURBAN KANSAS CITY, KA	0.978	0.964	1.181

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
660	1	LEXINGTON & LOUISVILLE, KY	0.984	0.917	0.668
660	3	RURAL KENTUCKY	0.974	0.875	0.676
660	2	SM CITIES (CITY LIMITS) KY	0.976	0.898	0.711
528	7	ALEXANDRIA, LA	0.985	0.889	0.810
528	3	BATON ROUGE, LA	0.991	0.966	0.810
528	6	LAFAYETTE, LA	0.982	0.928	0.810
528	4	LAKE CHARLES, LA	0.975	0.907	0.810
528	5	MONROE, LA	0.979	0.880	0.810
528	1	NEW ORLEANS, LA	0.994	1.003	1.187
528	50	RURAL LOUISIANA	0.972	0.880	0.851
528	2	SHREVEPORT, LA	1.003	0.940	0.810
21200	2	CENTRAL MAINE	0.942	0.903	0.718
21200	1	NORTHERN MAINE	0.947	0.912	0.718
21200	3	SOUTHERN MAINE	0.956	0.980	0.718
690	1	BALTIMORE/SURR. CNTYS, MD	1.027	1.040	0.972
690	3	SOUTH + E. SHORE MD	1.011	1.010	0.847
690	2	WESTERN MARYLAND	1.006	1.013	0.873
700	2	MASS.SUBURBS/RURAL(CITIES)	0.997	1.072	0.857
700	1	MASSACHUSETTS URBAN	1.002	1.131	0.857
710	1	DETROIT, MI	1.059	1.091	1.740
710	2	MICHIGAN, NOT DETROIT	1.010	0.971	1.256
720	2	NORTHERN MINNESOTA	0.983	0.919	0.747
720	4	SOUTHERN MINNESOTA	0.979	0.901	0.749
10240	1	ST. PAUL-MINNEAPOLIS, MN	1.014	1.024	0.749
10250	1	RURAL MISSISSIPPI	0.960	0.838	0.645
10250	2	URBAN MS (CITY LIMITS)	0.966	0.902	0.652
740	3	K.C. (JACKSON COUNTY), MO	0.978	0.964	1.181
740	2	N. K.C. (CLAY/PLATTE), MO	0.978	0.964	1.181
11260	3	RURAL (EXCL RURAL NW) MO	0.950	0.847	1.193
740	6	RURAL NW COUNTIES, MO	0.953	0.866	1.181
11260	2	SM. E.CITIES+JEFF.CNTY,MO	0.973	0.907	1.301
740	1	ST. JOSEPH, MO	0.950	0.867	1.181
11260	1	ST. LOUIS/LG. E.CITIES, MO	0.988	0.963	1.388
751	1	MONTANA	0.967	0.926	0.720
655	15	OMAHA + LINCOLN, NE	0.971	0.929	0.436
655	16	RURAL NEBRASKA	0.952	0.849	0.443
655	17	URBAN (CNTY POP>25000) NE	0.956	0.865	0.436
1290	3	ELKO & ELY (CITIES), NV	0.984	1.026	1.147
1290	1	LAS VEGAS,ET AL(CITIES),NV	1.036	1.082	1.147
1290	2	RENO, ET AL (CITIES), NV	1.008	1.141	1.147
1290	99	RURAL NEVADA	1.020	1.079	1.147
780	40	NEW HAMPSHIRE	0.962	1.011	0.603
860	2	MIDDLE NEW JERSEY	1.034	1.070	1.297
860	1	NORTHERN NEW JERSEY	1.040	1.131	1.152
860	3	SOUTHERN NEW JERSEY	1.016	1.030	1.476
1360	1	NEW MEXICO	0.981	0.925	0.769
801	1	BUFFALO/SURR. CNTYS, NY	1.006	0.942	0.966

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
803	1	MANHATTAN, NY	1.059	1.255	1.865
801	3	N. CENTRAL CITIES, NY	0.997	0.952	0.966
803	2	NYC SUBURBS/LONG I., NY	1.060	1.229	1.959
803	3	POUGHKPSIE/N.NYC SUBURBS	1.004	1.018	1.225
14330	4	QUEENS, NY	1.059	1.255	1.865
801	2	ROCHESTER/SURR. CNTYS, NY	1.021	1.017	0.966
801	4	RURAL NEW YORK	0.988	0.935	0.966
5535	95	RURAL NORTH CAROLINA	0.963	0.883	0.378
5535	94	URBAN (CITY LIMITS) NC	0.975	0.926	0.378
820	1	NORTH DAKOTA	0.965	0.895	0.690
16360	1	AKRON, OH	0.993	0.944	0.923
16360	2	CINCINATI, OH	0.989	0.956	0.923
16360	3	CLEVELAND, OH	1.011	0.968	0.923
16360	4	COLUMBUS, OH	0.983	0.956	0.923
16360	5	DAYTON, OH	0.999	0.935	0.923
16360	9	E. CENTRAL (STEUBENVL), OH	0.974	0.912	0.923
16360	7	MANSFIELD, OH	0.972	0.906	0.923
16360	13	MARION + SURR. CNTYS., OH	0.971	0.911	0.923
16360	6	NORTHWEST (LIMA) OH	0.973	0.919	0.923
16360	14	SCIOTO VALLEY, OH	0.977	0.936	0.923
16360	15	SOUTHEAST (OHIO VALLEY) OH	0.973	0.909	0.848
16360	8	SPRINGFIELD, OH	1.004	0.940	0.923
16360	10	TOLEDO (LUCAS/WOOD), OH	0.991	0.996	0.923
16360	12	W. CENTR (LAKE PLAINS), OH	0.969	0.906	0.923
16360	11	YOUNGSTOWN, OH	0.987	0.937	0.923
1370	1	OK CITY, ET AL (CITIES),OK	0.969	0.961	0.517
1370	99	RURAL OKLAHOMA	0.967	0.877	0.513
1370	4	SM. CITIES (NORTHERN), OK	0.961	0.874	0.517
1370	3	SM. CITIES (SOUTHERN), OK	0.967	0.865	0.517
1370	2	TULSA, ET AL (CITIES), OK	0.978	0.953	0.517
1380	2	EUGENE, ET AL (CITIES), OR	0.968	1.008	0.953
1380	1	PORTLAND,ET AL (CITIES),OR	0.993	1.033	0.953
1380	99	RURAL OREGON	0.979	0.997	0.953
1380	3	SALEM, ET AL (CITIES), OR	0.974	0.991	0.953
1380	12	SW OR. CITIES(CITY LIMITS)	0.974	0.988	0.953
865	2	LG. PENNSYLVANIA CITIES	1.007	1.001	1.362
865	1	PHILLY/PITT MED SCHS/HOSPS	1.014	1.014	1.467
865	4	RURAL PENNSYLVANIA	0.976	0.935	0.932
865	3	SMALL PENNSYLVANIA CITIES	0.984	0.941	0.949
973	20	PUERTO RICO	0.882	0.764	0.467
870	1	RHODE ISLAND	1.009	0.998	0.736
880	1	SOUTH CAROLINA	0.971	0.874	0.457
820	2	SOUTH DAKOTA	0.951	0.857	0.689
5440	35	TENNESSEE	0.969	0.896	0.408
900	29	ABILENE, TX	0.971	0.888	0.442
900	26	AMARILLO, TX	0.972	0.900	0.505
900	31	AUSTIN, TX	0.969	0.968	0.505

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
900	20	BEAUMONT, TX	0.998	0.955	0.505
900	9	BRAZORIA, TX	1.025	0.955	0.505
900	10	BROWNSVILLE, TX	0.980	0.888	0.505
900	24	CORPUS CHRISTI, TX	0.976	0.944	0.505
900	11	DALLAS, TX	0.996	0.971	0.505
900	12	DENTON, TX	0.996	0.971	0.505
900	14	EL PASO, TX	0.995	0.894	0.505
900	28	FORT WORTH, TX	0.973	0.936	0.505
900	15	GALVESTON, TX	0.982	0.968	0.505
900	16	GRAYSON, TX	0.964	0.903	0.505
900	18	HOUSTON, TX	1.014	0.982	0.657
900	33	LAREDO, TX	0.968	0.856	0.505
900	17	LONGVIEW, TX	0.968	0.929	0.505
900	21	LUBBOCK, TX	0.950	0.881	0.505
900	19	MC ALLEN, TX	0.945	0.873	0.505
900	23	MIDLAND, TX	1.023	0.998	0.505
900	2	NORTHEAST RURAL TEXAS	0.969	0.884	0.465
900	13	ODESSA, TX	1.008	0.971	0.505
900	25	ORANGE, TX	0.998	0.955	0.505
900	30	SAN ANGELO, TX	0.954	0.902	0.505
900	7	SAN ANTONIO, TX	0.973	0.929	0.505
900	3	SOUTHEAST RURAL TEXAS	0.973	0.894	0.494
900	6	TEMPLE, TX	0.969	0.886	0.505
900	8	TEXARKANA, TX	0.953	0.883	0.505
900	27	TYLER, TX	0.984	0.931	0.505
900	32	VICTORIA, TX	0.976	0.973	0.505
900	22	WACO, TX	0.981	0.871	0.505
900	4	WESTERN RURAL TEXAS	0.961	0.852	0.447
900	34	WICHITA FALLS, TX	0.969	0.896	0.505
910	9	UTAH	0.993	0.952	0.741
780	50	VERMONT	0.942	0.941	0.534
10490	1	RICHMOND+CHARLOTTESVL, VA	0.975	0.953	0.464
10490	4	RURAL VIRGINIA	0.967	0.888	0.518
10490	3	SM. TOWN/INDUSTRIAL VA	0.971	0.892	0.538
10490	2	TIDEWATER+N. VA COUNTIES	0.989	0.994	0.703
930	4	E.CEN+NE WA (EXCL SPOKANE)	0.991	0.979	1.067
930	2	SEATTLE (KING CNTY), WA	1.019	1.049	1.067
930	3	SPOKANE+RICHLND(CITIES),WA	0.997	0.997	1.067
930	1	W + SE WA (EXCL SEATTLE)	1.008	0.992	1.067
16510	16	CHARLESTON, WV	0.987	0.962	0.690
16510	18	EASTERN VALLEY, WV	0.962	0.881	0.716
16510	19	OHIO RIVER VALLEY, WV	0.962	0.881	0.690
16510	20	SOUTHERN VALLEY, WV	0.960	0.876	0.690
16510	17	WHEELING, WV	0.975	0.900	0.739
951	13	CENTRAL WISCONSIN	0.960	0.888	0.637
951	40	GREEN BAY, WI (NORTHEAST)	0.979	0.913	0.637
951	54	JANESVILLE, WI (S-CENTRAL)	0.970	0.905	0.637

GEOGRAPHIC PRACTICE COST INDICES BY MEDICARE CARRIER LOCALITY

CARRIER NUMBER	LOCALITY NUMBER	LOCALITY NAME	WORK	OVERHEAD	MALPRACTICE
951	19	LA CROSSE, WI (W-CENTRAL)	0.974	0.922	0.651
951	15	MADISON, WI (DANE COUNTY)	0.977	0.979	0.637
951	46	MILWAUKEE SUBURBS, WI (SE)	1.010	1.008	0.637
951	4	MILWAUKEE, WI	1.008	1.009	0.637
951	12	NORTHWEST WISCONSIN	0.970	0.898	0.652
951	60	OSHKOSH, WI (E-CENTRAL)	0.974	0.911	0.637
951	14	SOUTHWEST WISCONSIN	0.960	0.888	0.637
951	36	WAUSAU, WI (N-CENTRAL)	0.971	0.898	0.637
5530	21	WYOMING	0.988	0.938	0.642

Note: Work GPCI is the 1/4 work GPCI required by OBRA 89.

ADDENDUM D

Information for Obtaining Sources of Data Underlying Model Fee Schedule

National Technical Information Service (NTIS); phone 1-800-336-4700; or (703)487-4630; Springfield, Va 22161

Government Printing Office (GPO); phone (202)783-3238 for orders, (202)275-3050 for service inquiries; (202)275-3054 for complaints; mail to Superintendent of Documents, U.S.G.P.O., Washington, D.C., 20402

1. Harvard Phase I volumes; NTIS;

   Volume I, Executive Summary, PB89-101828

   Volume II, Data description and analysis, PB89-101836

   Volume III, Results and conclusions for surveyed procedures, PB89-101844

   Volume IV, Copies of surveys and other informaiton, PB89-101851

   Volume IVA, Visit and consultation methodology and results, PB89-164412

   Volume V, Documentation for the data tape, PB89-101869

   Volume VI, Final values and components, PB89-164420

   Survey data tape (including Volume IV and Volume V documentation) PB89-101810

   Phase I final values data tape, PB89-164404

2. October 1989 Reports to Congress "Medicare Physician Payment" (HCFA pub. No. 03287); composed of three reports:

   - "Volume and Intensity of Physician Services"

   - "Relative Value Scales for Physician Services" and

   - "Implementation of a National Fee Schedule"

   NTIS accession # PB90-148370
   GPO stock number 017-060-00314-6

3. Center for Health Economics Research (CHER) report on "Geographic Variation in Surgical Fees", NTIS PB90-122466

4. Urban Institute GPCI report "The Geographic Medicare Index: Alternative Approaches"; NTIS PB89-216592

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federal register

Tuesday,
September 4, 1990

Part V

Department of Transportation

Coast Guard

33 CFR Parts 126, 154, 155, and 156
Hazardous Materials Pollution Prevention; Final Rule

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Parts 126, 154, 155, and 156

[CGD 86-034]

RIN 2115-AC29

Hazardous Materials Pollution Prevention

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is amending its pollution prevention regulations for vessels and waterfront facilities to include hazardous materials, as well as oil, and to consolidate the waterfront facility safety requirements. These amendments are needed to prevent or mitigate discharges of bulk liquid hazardous materials by increasing the safety precautions taken during the transfer of these materials to and from waterfront facilities and vessels. They will also simplify the administration and enforcement of regulations for waterfront facilities handling bulk liquid hazardous materials by consolidating all transfer requirements into two parts of the Code of Federal Regulations.

DATES: This rule is effective on October 4, 1990.

FOR FURTHER INFORMATION CONTACT: Mr. Gary W. Chappell, Office of Marine Safety, Security and Environmental Protection, (202) 267-0491.

SUPPLEMENTARY INFORMATION: On June 13, 1988, a notice of proposed rulemaking (NPRM), entitled "Hazardous Materials Pollution Prevention", was published in the **Federal Register** (53 FR 22118). The Coast Guard received ten letters commenting on the proposed rulemaking. A public hearing was not requested at that time and one was not held. On June 8, 1989, a supplemental notice of proposed rulemaking (SNPRM), entitled "Hazardous Materials Pollution Prevention", was published in the **Federal Register** (54 FR 24718) in response to comments on the initial rulemaking proposal. The Coast Guard received eight letters commenting on the supplemental rulemaking proposal. A public hearing was not held. One comment requested a public hearing to discuss the proposed incorporation of several sections of the International Safety Guide for Oil Tankers and Terminals (ISGOTT). The comment did not specify reasons for this request. The Coast Guard determined that oral presentations on this matter would not aid the rulemaking process.

Drafting Information

The principal persons involved in drafting this document are Mr. Gary W. Chappell, Project Manager, and Mr. Stephen H. Barber, Project Counsel, Office of Chief Counsel.

Background

This rulemaking expands the oil pollution prevention regulations to include standards for liquid hazardous materials other than oil transferred in bulk. The oil pollution prevention regulations have proven to be more effective at preventing spills during bulk liquid transfers than have the hazardous materials regulations in 33 CFR 126.15. By extending the oil pollution prevention regulations to hazardous materials, the number and size of hazardous materials spills during transfers are expected to decline.

This rulemaking also consolidates the requirements for bulk liquid dangerous cargo terminals by incorporating some of the safety requirements from 33 CFR part 126 into 33 CFR part 154 and deleting the applicability of 33 CFR part 126 to bulk oil and liquid hazardous material terminals. Consolidating these rules into part 154 will simplify the administration and enforcement of the waterfront facility regulations.

Two requirements are included in this rulemaking due to special hazards. The first extends the prohibition in § 155.470 against the carriage of oil in forepeak tanks and other spaces forward of a collision bulkhead to all ships built after 1982 and to hazardous materials as well as oil. Prohibiting the carriage of these materials forward of a collision bulkhead will decrease the risk of their release during a collision. The second special requirement mandates the use of procedures contained in the International Safety Guide for Oil Tankers and Terminals (ISGOTT) during tank cleaning operations on vessels carrying oil. Explosions, fires, and personnel injuries during tank cleaning operations on vessels during the last 10 years have indicated a need for safer tank cleaning procedures. By following the ISGOTT procedures, the amount of damage and number of injuries that occur during tank cleaning should be reduced.

Discussion of Comments and Changes Since Publication of the SNPRM

The regulatory text in this rulemaking document has been reorganized to more clearly present the amendments set out in the NPRM and SNPRM. All changes to each regulatory section have been combined into a single numbered paragraph and the paragraphs arranged in numerical order according to the section number. To avoid unnecessarily overburdening the **Federal Register**, we have not restated the entire text of parts 154, 155, and 156. Only the changes are identified. A typed copy of the full text of parts 154, 155, and 156 with changes is available from the Coast Guard (G-MPS-3), Room 1108, 2100 Second Street SW., Washington, DC 20593-0001, (202) 267-0491. The full text with changes also will be published in the July 1, 1991 edition of the Code of Federal Regulations.

Certain non-substantive, editorial changes have been made to clarify and simplify the regulatory text. For example, the definition of the term "hazardous material" has been revised without substantive change. The other changes—those resulting from the comments received—are discussed below.

1. Two comments suggested that proposed § 154.100, Applicability, be changed so that small facilities (i.e. those capable of transfers only to vessels with a capacity of less than 250 barrels) need not be required to meet all of the safety requirements in § 154.735, in every instance. The primary concern was that these requirements, particularly the requirements for guards, would be unnecessarily burdensome on small facilities, such as small marinas and unmanned production facilities in remote areas.

The Coast Guard does not intend to apply the § 154.735 requirements to all small facilities, even though 33 CFR part 126 would permit such an application. Proposed § 154.100 (new § 154.100(b)) has been changed to limit the application of § 154.735 for small facilities only to those facilities which, in the opinion of the Coast Guard Captain of the Port (COTP), require such an application. The COTP is authorized to apply, on a case by case basis, all or a portion of § 154.735 to small facilities if necessary for their safety, the safety of their personnel, or the safety of the public. In making a decision, the COTP will consider such factors as the frequency of transfers conducted at the facility or the facility's spill history. Section 154.100(b) requires written notice to the facility operator of a decision to apply the § 154.735 safety requirements to a small facility.

2. One comment indicated that § 154.100, Applicability, did not clearly indicate whether the safety requirements were applicable only when transfers were being conducted or at all times.

Most of the pollution prevention requirements are only applicable during

transfer operations but some requirements are applicable at all times when the facility is operational. Records, for instance, must be available even when transfers are not occurring. The safety requirements in § 154.735 are applicable at all times and may even be applied to non-operational facilities unless the storage tanks and piping are gas free. To clarify this point, the wording in § 154.100 has been changed by replacing the word "transfers" with the words "is capable of transferring".

3. A review of the proposed §§ 154.735(d) and 154.735(j)(2) indicated that the term "Coast Guard approved" is not clear and the reference to § 154.310(b)(16) in § 154.735(j)(2) is incorrect. The Coast Guard does not approve the manufacture of portable fire extinguishers; however, it does accept fire extinguishers approved by Underwriters Laboratories, Inc., Underwriters' Laboratories of Canada, and Factory Mutual Research Corporation. Currently approved independent laboratories are listed in 46 CFR 162.028–5. Section 154.735(d) has been changed to replace the words "Coast Guard approved fire extinguishers" with the words "fire extinguishers approved by an independent laboratory listed in 46 CFR 162.028–5". Section 154.735(j)(2) has been changed to replace the words "Coast Guard approved fire extinguisher" with the words "fire extinguisher approved by an independent laboratory listed in 46 CFR 162.028–5". The reference to § 154.310(b)(16) in (proposed) § 154.735(j)(2) is incorrect and has been removed. Because it was intended that this rulemaking incorporate the safety requirements in 33 CFR part 126, § 154.735(j)(2) has been changed to replace the reference with wording in keeping with § 126.15(e).

4. One comment pointed out that § 154.735(n) would require that pumps and other fixed equipment on a pier or wharf be removed for refueling, yet the same equipment may be refueled on vessels.

This requirement was intended to apply only to automotive equipment, rather than to fixed equipment that cannot be moved easily for refueling. Section 154.735(n) has been changed so that it is applicable only to automotive equipment. Unsafe fueling of equipment other than automobiles on piers is prohibited by § 154.735(j).

5. Two comments suggested that § 154.735(r) not be applied to older barge cleaning facilities because much of their electrical equipment would have to be replaced.

The Coast Guard agrees that, if the electrical wiring and equipment is maintained in a safe condition so as to prevent fires as required by § 154.735(p), it does not need to be replaced. However, as that older wiring and equipment is replaced, installations must conform to the requirements in § 154.735(r). Section 154.735(r) has been changed so that it is applicable only to new installations of electrical wiring and equipment.

6. Four comments suggested that § 154.735(s) be deleted. Two of these comments did not provide specific reasons. The other two comments stated that the main reason the International Safety Guide for Oil Tankers and Terminals (ISGOTT) should not be referenced is because they are international safety guidelines and not industry consensus standards. Both comments also included other reasons why ISGOTT should not be referenced. The two comments indicated that U.S. interests had little input into the development of the guidelines and that the guidelines could be changed at any time with little or no input from the affected parties. Such a change in the regulations without opportunity for public comment would be a violation of the Administrative Procedures Act.

The Coast Guard takes the position that the ISGOTT guidelines represent a reasonable approach to controlling the hazards involved in tank cleaning and are well respected by those in industry (U.S. and abroad) that use them. As indicated in § 154.106(b), only the third edition of ISGOTT is incorporated by reference. If the Coast Guard chooses to incorporate an edition other than the third edition, a notice in the **Federal Register** with an opportunity for public comment must be published, as required by § 154.106(a).

7. Two comments noted that ISGOTT sections 8.1, 8.2, 8.3, and 8.5 (as referenced in § 154.735(s)) themselves refer to other chapters within ISGOTT. The comments expressed concern that an incorporation of ISGOTT sections 8.1, 8.2, 8.3, and 8.5 would expand indirectly the amount of ISGOTT being incorporated.

The incorporated ISGOTT sections do refer to other ISGOTT chapters but the only material incorporated from those chapters is the material that relates to tank cleaning and gas freeing operations. The chapters referenced contain, in part, general safety guidelines, transfer procedures, inert gas procedures, and procedures for entry into enclosed spaces. Material in those chapters not relating to tank cleaning and gas freeing operations and not referenced in ISGOTT sections 8.1, 8.2, 8.3, and 8.5 would not be incorporated in § 154.735(s).

8. One comment suggested that the incorporation of ISGOTT section 8.2.3(a) in § 154.735(s) would require that tanks be flushed with water and stripped before washing. This procedure would create a large amount of contaminated water and ruin a valuable product that could otherwise be recovered.

ISGOTT does not prohibit the stripping of any recoverable product remains before washing. If the tanks were not flushed with water to remove product residue before washing, a "too lean" atmosphere could not be maintained. In that case, operations would have to be conducted under the procedures in ISGOTT section 8.2.4 for washing in an undefined atmosphere and would require additional safety precautions.

9. One comment suggested that the incorporation of ISGOTT section 8.2.3(b) in § 154.735(s) would require that the gas concentration in the tank's atmosphere be reduced to 10% or less of the lower flammable limit (LFL) before the tank is washed. The comment contends that the 10% level is too general for all products. It may not be high enough for some and may be too high for others.

Ten percent of the LFL provides a reasonable safety margin for all products because the LFL is based on the flammable limits of the specific product in question. The vapors of a particular product cannot ignite at a concentration below the LFL for that product. Ten percent of the LFL is used because it is a widely accepted industry standard for flammability safety.

10. Two comments suggested that the incorporation of ISGOTT section 8.2.3(d) in § 154.735(s) would require that hose connections on portable tank washing machines, if used, be tested for electrical continuity before each use. The comment suggested that this requirement would create an excessive burden on barge cleaning facilities because several tests may have to be conducted in a single day.

The test for electrical continuity is necessary to ensure the proper grounding of hose connections on portable tank washing machines. Every time the connections are broken and reconnected, this test should be conducted. Testing less frequently may allow the use of potentially unsafe hose connections.

11. One comment indicated that gas measuring instruments used for gas tests under ISGOTT section 8.2.3(e) (§ 154.735(s)) are likely to give

inaccurate readings during tank washing.

While it is true that water droplets drawn into the test instrument can influence the reading, proper shielding of the intake hose during tank washing should prevent the intake of water into the instrument and allow accurate readings.

12. Two comments indicated that the incorporation of ISGOTT sections 8.2.3(g) and 8.2.4(c) in § 154.735(s) would prohibit the use of recirculated water without giving consideration to the amount of processing received by the water before being recirculated. The comments contend that this would cause an overload of contaminated wash water for cleaning facilities.

The Coast Guard agrees that ISGOTT is not flexible enough on this point. Therefore, § 154.735(s) has been changed to allow the use of recirculated water if the water has been processed to remove product residues.

13. One comment expressed concern that the incorporation of ISGOTT sections 8.2.3(h) and 8.2.9 in § 154.735(s) would prohibit the use of steam for cleaning tanks. The comments contend that this would create a problem when cleaning tanks carrying certain products.

ISGOTT section 8.5 permits the use of steam in cleaning tanks when they have been either inerted or water washed and gas freed. The reason for these limitations is the potential for static electricity discharges from the steam nozzel. This policy is in keeping with the ANSI/NFPA 77–1983 Recommended Practice on Static Electricity.

14. Two comments expressed concern that the incorporation of ISGOTT section 8.2.4(d) in § 154.735(s) would prohibit the use of chemical additives for washing tanks. The comments contend that this would create a problem when cleaning tanks carrying certain products.

ISGOTT section 8.5 permits the use of chemical additives in cleaning tanks. When using tank cleaning chemicals capable of producing a flammable atmosphere, the tank should be inerted, except when the chemicals are used in small quantities for localized cleaning.

15. One comment indicated that the incorporation of ISGOTT section 8.2.10 in § 154.735(s) would place on the facility operator, rather than the vessel operator, the responsibility for flushing the bottom of tanks after every discharge of leaded gasoline. This activity is controlled by the vessel owner or operator, not the tank cleaning facility.

The Coast Guard agrees and has amended § 154.735(s) to clarify this point.

16. Two comments suggested that the incorporation of ISGOTT section 8.2.11 in § 154.735(s) would require that the gas concentration be maintained at 1% or less of the LFL during the removal of sludge, scale, and sediment. (See section 10.5.5.) The comments contend that this level is too low for a general standard. Cold work can be done at higher levels with proper ventilation of the tank and NFPA–306 suggests that hot work can be done if the LFL is below 10%.

ISGOTT section 8.2.11 sets reasonable requirements for the entry of unprotected personnel into tanks for sludge, scale, and sediment removal by hand. The Coast Guard agrees that the requirements in ISGOTT section 8.2.11 do not apply when personnel are protected from the tank atmosphere by breathing apparatus. Section 154.735(s) has been amended so that ISGOTT section 8.2.11 does not apply if personnel use breathing apparatus which protect them from the tank atmosphere.

17. Two comments indicated that the ISGOTT requirement for a five hour waiting period between the time of cleaning the compartment and the testing of the compartment with non-metallic sounding devices is unreasonable.

There is no such requirement in the ISGOTT sections (8.1 through 8.3 and 8.5) incorporated in § 154.735(s). If soundings are made less than five hours after washing, section 8.2.4 requires that sounding be done through a sounding pipe, if one is fitted. If a sounding pipe is not fitted, any metallic components of the sounding device must be bonded. There is no restriction on sounding equipment with non-metallic components.

18. One comment indicated that the incorporation of ISGOTT section 8.3.2(g) in § 154.735(s) contradicts the proposed rule on volatile organic compound emission standards formulated for tankers and barges. The comment stated that the proposed Coast Guard regulations require that no means be provided to close off the common vent header, while ISGOTT requires that each tank be isolated from the common vent header.

ISGOTT does not contradict existing or proposed Coast Guard regulations. Existing Coast Guard regulations and the NPRM entitled "Marine Vapor Control Systems" (54 FR 41366) prohibit the isolation of tanks from the pressure-vaccum relief valve. Where the common vent header is the only means of pressure-vaccum relief, a means to isolate the tank from the common vent header may not be installed. Once a tank has been washed to remove product residues, the tank hatch may be opened to provide pressure-vacuum relief for the tank. As long as the tank hatch is open, a device may be temporarily installed to isolate the tank from the common vent header during gas freeing operations as required by ISGOTT.

19. One comment expressed concern over the provision in ISGOTT section 8.5 that states: "Where these operations take place in port, additional requirements may be imposed by local authorities." The comment suggested that, if § 154.735(s) incorporates ISGOTT section 8.5, the Coast Guard also would be requiring that all locally imposed rules be observed.

Under § 154.735(s), the Coast Guard is requiring that the ISGOTT provisions be met, not the provisions of any other authority. Should a governmental entity have the authority to impose additional requirements, they would be outside of the scope of § 154.735(s) and not enforced by the Coast Guard under that section.

20. Two comments pointed out that the ISGOTT guidelines do not address the use of electrical ventilation equipment, which has been responsible for several incidents involving tank cleaning operations.

This problem is addressed by ISGOTT section 8.3.2(b), which is incorporated in § 154.735(s). Section 8.3.2(b) states that "portable fans or blowers should only be used if they are hydraulically, pneumatically or steam driven."

21. Two comments expressed concern that the ISGOTT sections referenced in § 154.735(s) do not consider the proper ventilation of tanks, the release of toxic or flammable vapors into the atmosphere, and the procedures for entry and egress.

The referenced ISGOTT sections require the ventilation of tanks for maintaining a proper atmosphere in the tank during tank washing and gas freeing operations (sections 8.2.3, 8.3.2 and 8.3.4) but do not discuss specific vapor control requirements. The release of flammable vapors into the atmosphere and vapor control considerations during tank cleaning are beyond the scope of this rulemaking. ISGOTT does set standards for enclosed space entry and egress in section 8.5, which references section 10.4.

22. One comment pointed out that the ISGOTT procedures for washing in a "too lean" atmosphere appear to violate environmental regulations for organic vapor release.

ISGOTT section 8.2.3(b), as incorporated in § 154.735(s), requires ventilation of the tank but does not

require ventilation to the atmosphere. This procedure is necessary to maintain a too lean atmosphere in the tank. Where environmental regulations prohibit ventilation to the atmosphere, the operator will have to use vapor recovery equipment during tank washing or use a different tank washing procedure, such as washing in an over rich or undefined atmosphere. Use of either approach is permitted by ISGOTT.

23. One comment suggested that alternatives to the stationing of guards, as specified in proposed § 154.735(t), be allowed.

The Coast Guard agrees that, at some facilities, alternatives to guards may be acceptable as long as they provide the same functional purpose. 33 CFR 126.15(a) indicates that guards should provide surveillance, prevent unlawful entrance, detect fire hazards, and check the readiness of protective equipment. In addition, experience has shown that guards have proven valuable in detecting pollution incidents and other emergency situations at waterfront facilities. At some facilities, roving patrols or electronic surveillance equipment used in conjunction with locks, fences, and other security measures could accomplish the same functions. Section 154.735(t) has been changed to allow reasonable alternatives acceptable to the COTP. Acceptance by the COTP is necessary because of the numerous factors which must be considered in determining whether the alternative provides an adequate substitute for guards.

24. One comment pointed out that the term "barrel" as used in part 154 should be defined because many of the hazardous materials subject to the revised regulations are not measured in oilfield barrels.

The Coast Guard agrees. The regulations were originally written with oilfield barrels in mind when measuring capacities. Without defining the term "barrel", the measure could be confused with the standard barrel, which has a different capacity, when applied to materials other than oil. A definition for the term "barrel" has been added to § 154.105.

25. Changes to § 155.710 (a)(1) and (a)(2) require tankermen to be certificated for the grade of cargo carried or the cargo last carried. The term "grade of cargo" in those paragraphs refers to Grade A, B, or C flammable liquids, as defined in 46 CFR 30.10–22, or to Grade D or E combustible liquids, as defined in 46 CFR 30.10–15. No certification procedure is required by this rulemaking for hazardous materials that are not flammable or combustible. Under a separate Coast Guard rulemaking entitled "Tankerman Requirements and Qualifications for Persons-In-Charge of Dangerous Liquid and Liquefied Gas Transfer Operations" (CGD 79–116), certification requirements for hazards other than flammability and combustibility are being developed.

Incorporation by Reference

The material in § 154.106 has been approved for incorporation by reference by the Director of the Federal Register under 5 U.S.C. 552 and 1 CFR part 51. The material is available as indicated in that section.

If substantive changes are made by the publisher to the materials incorporated, those changes may be considered for incorporation. However, before taking final action, the Coast Guard will publish a separate notice in the **Federal Register** for public comment.

E.O. 12291 and DOT Regulatory Policies and Procedures

This final rule is considered to be non-major under Executive Order 12291 and significant under the Department of Transportation (DOT) regulatory policies and procedures (44 FR 11034; February 26, 1979). A final Regulatory Evaluation has been prepared and placed in the rulemaking docket. It may be inspected or copied at the Office of the Marine Safety Council, room 3314, U.S. Coast Guard Headquarters, 2100 Second Street SW., Washington, DC 20593–0001 between 8 a.m. and 3 p.m., Monday through Friday, except Federal holidays. The telephone number is (202) 267–1477.

No comments were received on the draft Regulatory Evaluation. The changes made to the rule since publication of the SNPRM either will impose no new burdens or will reduce the burdens proposed in the NPRM and SNPRM. The changes to § 154.100 will limit the applicability of § 154.735 safety requirements for small facilities to only those facilities given notice by the Coast Guard Captain of the Port (COTP), rather than to all small facilities, as stated in the SNPRM. The changes to § 154.735 were in response to the comments received and provide for reasonable alternatives to the proposed provisions. Other changes are editorial in nature and are intended to clarify or simplify the text without imparting new requirements. As a result, only minor changes were made in the final Regulatory Evaluation.

The cost resulting from this rule will be low. The oil pollution prevention regulations already apply to some of these facilities and vessels because they transfer both oil and hazardous material. Also many facility and vessel owners and operators voluntarily follow these accepted pollution prevention practices because they prevent accidental discharges and because the owners and operators want to avoid paying the penalties and cleanup costs for spills of hazardous materials. Waterfront facilities will be required to develop or revise a Letter of Intent (§ 154.110) and an Operations Manual (§§ 154.300 through 154.325). Vessels will need to develop or revise written transfer procedures (§ 155.750). Continuing costs required by this rule include annual equipment tests and inspections, completion of a Declaration of Inspection for each transfer, and maintenance of records. This rule will impact approximately 300 waterfront facilities and 800 vessels not already subject to the current pollution prevention regulations.

Regulatory Flexibility Act

There were no comments on the impact of this rule on small entities. Most waterfront facilities handling bulk liquid hazardous materials are owned and operated by large entities. Consequently, few small entities will be impacted. Where small entities are affected, the impact will be relatively small due to the limited scope of their operations. Therefore, the Coast Guard certifies under section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 605(b)) that this final rule will not have a significant economic impact on a substantial number of small entities.

Paperwork Reduction Act

This rulemaking contains information collection requirements. These items have been submitted to the Office of Management and Budget (OMB) for review under the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and have been approved by OMB. The section numbers and the corresponding OMB approval number are:

Section	Topic	OMB control No.
154.107	Alternatives	2115–0096
154.108	Exemptions	2115–0096
154.110	Letter of Intent	2115–0077
154.300	Operations Manual	2115–0078
154.320	Amendments to Operations Manual	2115–0078
154.735(1)	Welding and Hot Work Permit	2115–0054
154.740	Records	2115–0096
155.120	Equivalents	2115–0096
155.130	Exemptions	2115–0096
155.720	Oil Transfer Procedures	2115–0120
155.820	Records	2115–0096
156.107	Alternatives	2115–0096
156.110	Exemptions	2115–0096

Section	Topic	OMB control No.
156.150	Declaration of Inspection	2115-0506
156.170	Equipment Tests and Inspections	2115-0096

Federalism Implications

This action has been analyzed in accordance with the principles and criteria contained in Executive Order 12612, and it has been determined that the final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Environmental Assessment

The Coast Guard has considered the environmental impact of the final rule and concluded that preparation of an environmental impact statement is not necessary. An environmental assessment with a finding of no significant impact has been prepared and is on file in the rulemaking docket at the address in the "E.O. 12291 and DOT Regulatory Policies and Procedures" section of this preamble.

This final rule is intended to prevent or mitigate the results of a hazardous material spill into the navigable waters of the United States and will have no adverse impact on the environment.

List of Subjects

33 CFR Part 126

Explosives, Harbors, Hazardous substances, Reporting and recordkeeping requirements.

33 CFR Part 154

Oil pollution, Reporting and recordkeeping requirements.

33 CFR Part 155

Oil pollution, Reporting and recordkeeping requirements.

33 CFR Part 156

Hazardous materials transportation, Oil pollution, Reporting and recordkeeping requirements, Water pollution control.

For the reasons set out in the preamble, parts 126, 154, 155, and 156 of chapter I, title 33, Code of Federal Regulations are amended as follows:

PART 126—[AMENDED]

1. The Authority citation for part 126 is revised to read as follows:

Authority: 33 U.S.C. 1231; 49 CFR 1.46.

§ 126.05 [Amended]

2. In § 126.05(a), by removing the words "any flammable or combustible liquid in bulk, except methane (46 CFR parts 30–38)"; and by removing the words "49 CFR part 172.101" and adding, in their place, the words "in 49 CFR 172.101 and for those materials carried as bulk liquids other than the cargoes listed in § 126.10(d)."

§ 126.07 [Amended]

3. In § 126.07, by adding after the semi-colon in paragraph (a) the word "or"; by removing paragraph (b); and by redesignating paragraph (c) as paragraph (b).

§ 126.10 [Amended]

4. In § 126.10(d), by removing the following cargoes from the list:

Acetone Cyanohydrin
Acrylonitrile
Allyl Chloride
Butylene Oxide
Carbon Disulfide
Chlorosulfonic Acid
Epichlorohydrin
Ethyl Ether
Motor Fuel Antiknock Compounds Containing Lead Alkyls
Oleum
Phosphorous, Elemental
Propylene Oxide
Toluene Diisocyanate
Vinyl Ethyl Ether

5. In § 126.15(o), by revising the introductory text to read as follows:

§ 126.15 Conditions for designation as designated waterfront facility.

* * * * *

(o) *Control of liquid cargo transfer systems.* When transferring the cargoes listed in § 126.10(d), the waterfront facility transfer system must meet the following:

* * * * *

PART 154—[AMENDED]

6. The authority citation for part 154 is revised to read as follows:

Authority: 33 U.S.C. 1231, 1321(j)(1)(C); sec. 2, E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 793; 49 CFR 1.46.

7. By revising the heading of part 154 to read as follows:

PART 154—FACILITIES TRANSFERRING OIL OR HAZARDOUS MATERIAL IN BULK

8. By revising § 154.100 to read as follows:

§ 154.100 Applicability.

(a) This part applies to each facility that is capable of transferring oil or hazardous material, in bulk, to or from a vessel with a capacity of 250 barrels or more. This part does not apply to the facility when it is in caretaker status (i.e. is not operational); except that, § 154.735 continues to apply if the facility's storage tanks or piping are not gas free.

(b) Upon written notice to the facility operator, the COTP may apply, as necessary for the safety of the facility, its personnel, or the public, all or portions of § 154.735 to each facility that is capable of transferring oil or hazardous material, in bulk, only to or from a vessel with a capacity of less than 250 barrels. If the facility is in caretaker status, the COTP may not apply the provisions of § 154.735 to the facility if its storage tanks and piping are gas free.

9.–10. In § 154.105, by adding the words "or hazardous material" after the word "oil" wherever it appears in the definition of the words "facility", "monitoring device", "tank vessel", and "transfer"; by removing the word "oil" before the word "transfer" in the definition of the words "person in charge"; and by adding the definition for the words "barrel", "hazardous material", "MARPOL 73/78", and "oil", in alphabetical order to read as follows:

§ 154.105 Definitions.

* * * * *

Barrel means a quantity of liquid equal to 42 U.S. gallons.

* * * * *

Hazardous material means a liquid material or substance, other than oil or liquefied gases, listed under 46 CFR 153.40 (a), (b), (c), or (e).

MARPOL 73/78 means the International Convention for the Prevention of Pollution from Ships, 1973 (done at London, November 2, 1973) as modified by the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (done at London, February 17, 1978).

* * * * *

Oil means oil of any kind or in any form, including but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil.

* * * * *

§§ 154.107 and 154.108 [Amended]

11. In §§ 154.107(a)(2) and 154.108 (a)(2)(ii) and (a)(3)(iii), by adding after the word "oil" the words "or hazardous material".

§ 154.110 [Amended]

12. In § 154.110(c), by removing the word "oil" before the word "transfer".

§ 154.300 [Amended]

13. In § 154.300, by removing the word "oil" before the word "transfer" in paragraph (a)(2) and by removing the words "an oil transfer" in paragraph (f) and adding, in their place, the words "a transfer".

14. In § 154.310, by adding the words "or hazardous material" after the word "oil" in paragraphs (a)(4), (a)(17)(ii), (a)(18), and (a)(19); by removing the word "oil" before the word "transfer" in paragraph (a)(16); and by revising paragraph (a)(5)(ii)(*a*) to read as follows:

§ 154.310 Operations manual: Contents.

(a) * * *

(5) * * *

(ii) * * *

(*a*) The name of the cargo as listed under appendix II of annex II of MARPOL 73/78, Table 30.25–1 of 46 CFR 30.25–1, Table 151.05 of 46 CFR 151.05–1, or Table 1 of 46 CFR part 153.

* * * * *

§ 154.320 [Amended]

15. In § 154.320(a)(2), by adding after the word "oil" the words "or hazardous material".

§ 154.325 [Amended]

16. In § 154.325(b), by removing the word "oil" before the word "transfer".

17. In § 154.500, by adding after the word "oil" in the introductory text and paragraph (c) the words "or hazardous material"; by removing the word "oil" before the word "transfer" in paragraphs (a)(2) and (b)(2); by removing the words "oil for" before the word "fuel" in paragraph (h); and by revising paragraph (e)(1) to read as follows:

§ 154.500 Hose assemblies.

* * * * *

(e) * * *

(1) The name of each product for which the hose may be used or, for oil products, the words "oil service";

* * * * *

18. In § 154.510, in paragraph (a), by adding words "or hazardous material" after the word "oil" and by removing the words "ANSI Standard B31.3 with Addenda B31.3a, *Petroleum Refinery Piping*" and adding, in their place, the words "ANSI B31.3" and by revising paragraph (c) to read as follows:

§ 154.510 Loading arms.

* * * * *

(c) Each mechanical loading arm used for transferring oil or hazardous material must have a means of being drained or closed before being disconnected after transfer operations are completed.

§§ 154.520, 154.525, 154.530, and 154.540 [Amended]

19. In §§ 154.520, 154.525, 154.530, and 154.540, by adding the words "or hazardous material" after the word "oil" wherever it appears.

20. In § 154.545, in paragraph (a), by removing the word "oil" before the word "containment"; in paragraphs (a), (c)(1), (c)(2), and (d)(4), by adding the words "or hazardous material" after the word "oil"; and by revising the introductory text of paragraph (d) to read as follows:

§ 154.545 Discharge containment equipment.

* * * * *

(d) The COTP may require a facility to surround each vessel conducting an oil or hazardous material transfer operation with containment material before commencing a transfer operation if—

* * * * *

21. By revising § 154.550 to read as follows:

§ 154.550 Emergency shutdown.

(a) The facility must have an emergency means to enable the person in charge of the transfer on board the vessel, at that person's usual operating station, to stop the flow of oil or hazardous material from the facility to the vessel. The means must be—

(1) An electrical, pneumatic, or mechanical linkage to the facility; or

(2) An electronic voice communications system continuously operated by a person on the facility who can stop the flow of oil or hazardous material immediately.

(b) The point in the transfer system at which the emergency means stops the flow of oil or hazardous material on the facility must be located near the dock manifold connection to minimize the loss of oil or hazardous material in the event of the rupture or failure of the hose, loading arm, or manifold valve.

(c) For oil transfers, the means used to stop the flow under paragraph (a) of this section must stop that flow within—

(1) 60 seconds on any facility or portion of a facility that first transferred oil on or before November 1, 1980; and

(2) 30 seconds on any facility that first transfers oil after November 1, 1980.

(d) For hazardous material transfers, the means used to stop the flow under paragraph (a) of this section must stop that flow within—

(1) 60 seconds on any facility or portion of a facility that first transferred hazardous material before October 4, 1990; and

(2) 30 seconds on any facility that first transfers hazardous material on or after October 4, 1990.

22. In § 154.570, in paragraph (a)(2), by adding the words "or hazardous material" after the word "oil"; in paragraphs (a)(3) and (b)(2), by removing the word "oil" before the word "transfer"; and by revising paragraph (a)(4) to read as follows:

§ 154.570 Lighting.

(a) * * *

(4) Each transfer operation work area on any barge moored at the facility to or from which oil or hazardous material is being transferred.

* * * * *

§ 154.710 [Amended]

23. In § 154.710, by removing the word "oil" before the word "transfer" wherever it appears and, in paragraph (a), by removing the words "and has advised the Captain of the Port in writing of his designation".

24. By adding § 154.735 to read as follows:

§ 154.735 Safety requirements.

Each operator of a facility, other than a mobile facility, shall ensure that the following safety requirements are met at the facility:

(a) Access to the facility by firefighting personnel, fire trucks, or other emergency personnel is not impeded.

(b) Materials which are classified as hazardous under 49 CFR parts 170 through 179 are kept only in the quantities needed for the operation or maintenance of the facility and are stored in storage compartments.

(c) Gasoline or other fuel is not stored on a pier, wharf, or other similar structure.

(d) A sufficient number of fire extinguishers approved by an independent laboratory listed in 46 CFR 162.028–5 for fighting small, localized fires are in place throughout the facility and maintained in a ready condition.

(e) The location of each hydrant, standpipe, hose station, fire extinguisher, and fire alarm box is conspicuously marked and readily accessible.

(f) Each piece of protective equipment is ready to operate.

(g) Signs indicating that smoking is prohibited are posted in areas where smoking is not permitted.

(h) Trucks and other motor vehicles are operated or parked only in designated locations.

(i) All rubbish is kept in receptacles.

(j) All equipment with internal combustion engines used on the facility—

(1) Does not constitute a fire hazard; and

(2) Has a fire extinguisher attached that is approved by an independent laboratory listed in 46 CFR 162.028-5, unless such a fire extinguisher is readily accessible nearby on the facility.

(k) Spark arresters are provided on chimneys or appliances which—

(1) Use solid fuel; or

(2) Are located where sparks constitute a hazard to nearby combustible material.

(l) Welding or hot work is not initiated, unless a permit is obtained from the COTP.

(m) Heating equipment has sufficient clearance to prevent unsafe heating of nearby combustible material.

(n) Automotive equipment having an internal combustion engine is not refueled on a pier, wharf, or other similar structure.

(o) There are no open fires or open flame lamps.

(p) Electric wiring and equipment is maintained in a safe condition so as to prevent fires.

(q) Electrical wiring and electrical equipment installed after October 4, 1990, meet NFPA 70.

(r) Electrical equipment, fittings, and devices installed after October 4, 1990, show approval for that use by—

(1) Underwriters Laboratories;

(2) Factory Mutual Research Corporation; or

(3) Canadian Standards Association.

(s) Tank cleaning or gas freeing operations conducted by the facility on vessels carrying oil residues or mixtures are conducted in accordance with sections 8.1, 8.2, 8.3, and 8.5 of the International Safety Guide for Oil Tankers and Terminals (ISGOTT). Prohibitions in ISGOTT against the use of recirculated wash water do not apply if the wash water is first processed to remove product residues. The provision in ISGOTT section 8.2.10 concerning flushing the bottom of tanks after every discharge of leaded gasoline does not apply. The provision in ISGOTT section 8.2.11 concerning the removal of sludge, scale, and sediment does not apply if personnel use breathing apparatus which protects them from the tank atmosphere.

(t) Guards are stationed, or equivalent controls acceptable to the COTP are used, to prevent unlawful access, detect fires, and report emergency situations at the facility.

§ 154.740 [Amended]

25. In § 154.740(b), by removing the word "oil".

PART 155—[AMENDED]

26. The authority citation for part 155 is revised and a note is added following the authority citation to read as follows:

Authority: 33 U.S.C. 1231, 1321(j)(1)(C); sec. 2, E. O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp., p. 793; 49 CFR 1.46. Sections 155.100 through 155.130, 155.350 through 155.400, 155.430, 155.440, and 155.470 also issued under 33 U.S.C. 1903(b).

Note: Additional requirements for vessels carrying oil or hazardous material are contained in 46 CFR parts 30 through 36, 150, 151, and 153.

27. By revising the heading of part 155 to read as follows:

PART 155—OIL OR HAZARDOUS MATERIAL POLLUTION PREVENTION REGULATIONS FOR VESSELS

28. By revising § 155.110 to read as follows:

§ 155.110 Definitions.

The definitions in part 151 of this chapter, except for the word "oil", and in part 154 of this chapter apply to this part.

§ 155.130 [Amended]

29. In § 155.130, in paragraphs (a)(2)(ii) and (d), by removing the words "by oil" after the word "pollution" and, in paragraph (a)(2)(iii), by removing the words "oil being discharged" and adding, in their place, the words "discharges occurring".

30. In § 155.310, in paragraphs (a)(1), (b)(1), and (b)(2), by removing the word "oil" wherever it appears; and by revising the section heading, the introductory text for paragraphs (a) and (b), and paragraphs (a)(2) and (b)(4) to read as follows:

§ 155.310 Cargo discharge containment.

(a) A tank vessel with a capacity of 250 or more barrels that is carrying oil or hazardous material as cargo must have—

* * * * *

(2) A means of draining or removing discharged oil or hazardous material from each container or enclosed deck area without discharging the oil or hazardous material into the water; and

* * * * *

(b) A tank barge with a capacity of 250 or more barrels that is carrying oil or hazardous material as cargo must meet paragraph (a) of this section or be equipped with—

* * * * *

(4) A means of draining or removing discharged oil or hazardous material from the fixed or portable container and from within the coamings without discharging the oil or hazardous material into the water.

§ 155.470 [Amended]

31. In § 155.470, by revising the section heading to read "Prohibited spaces"; in paragraph (a), by removing the words "an oceangoing" and adding, in their place, the word "a" and by adding the words "or hazardous material" after the word "oil"; and, in the introductory text for paragraph (b), by removing the words "oily waste" and adding, in their place, the words "hazardous material".

Subpart C—[Amended]

32. In the subpart heading for subpart C, by removing the word "Oil".

33. By revising § 155.700 to read as follows:

§ 155.700 Designation of person in charge.

The operator, or that person's agent, of each vessel with a capacity of 250 or more barrels of oil or hazardous material shall designate the person or persons in charge of each transfer to or from the vessel and of each tank cleaning operation.

§ 155.710 [Amended]

34. In § 155.710, in the introductory text for paragraph (a), by adding the words "or hazardous material" after the word "oil"; in paragraph (a)(1), by removing the word "oil" before the word "transfer"; and, in paragraphs (a)(1) and (a)(2), by adding the words "carried or the cargo" after the word "cargo".

35. By revising § 155.720 to read as follows:

§ 155.720 Transfer procedures.

The operator of a vessel with a capacity of 250 or more barrels of oil or hazardous material shall provide transfer procedures that meet the requirements of this part and part 156 of this chapter for transferring—

(a) To or from the vessel; and

(b) From tank to tank within the vessel.

§§ 155.730 and 155.740 [Amended]

36. In §§ 155.730 and 155.740, by removing the word "oil" wherever it appears.

37. In § 155.750, by removing the word "oil" before the word "transfer" wherever it appears; in paragraph (a)(5), by adding after the word "oil" the words "or hazardous material"; and by revising paragraph (a)(9) to read as follows:

§ 155.750 Contents of transfer procedures.

(a) * * *

(9) Procedures for reporting discharges of oil or hazardous material into the water; and

* * * * *

§ 155.760 [Amended]

38. In § 155.760, in the section heading and paragraph (a), by removing the word "oil" wherever it appears and, in paragraph (c), by removing the words "of oil".

39. By revising § 155.770 to read as follows:

§ 155.770 Draining into bilges.

No person may intentionally drain oil or hazardous material from any source into the bilge of a vessel.

40. By revising § 155.780 to read as follows:

§ 155.780 Emergency shutdown.

(a) A tank vessel with a capacity of 250 or more barrels that is carrying oil or hazardous material as cargo must have on board an emergency means to enable the person in charge of a transfer operation to a facility, to another vessel, or within the vessel to stop the flow of oil or hazardous material.

(b) The means to stop the flow may be a pump control, a quick-acting, power actuated valve, or an operating procedure. If an emergency pump control is used, it must stop the flow of oil or hazardous material if the oil or hazardous material could siphon through the stopped pump.

(c) The means to stop the flow must be operable from the cargo deck, cargo control room, or the usual operating station of the person in charge of the transfer operation.

§ 155.785 [Amended]

41. In § 155.785(a), by removing the word "oil" after the words "vessel" and "cargo" and adding after the words "carrying oil" the words "or hazardous material".

42. In § 155.790, by revising paragraph (a) to read as follows; and, in paragraph (b)(2), by removing the word "oil":

§ 155.790 Deck lighting.

(a) A self-propelled vessel with a capacity of 250 or more barrels of oil or hazardous material that is conducting transfer operations between sunset and sunrise must have deck lighting that adequately illuminates—

(1) Each transfer operations work area and each transfer connection point in use on the vessel; and

(2) Each transfer operations work area and each transfer connection point in use on each barge, if any, moored to the vessel to or from which oil or hazardous material is being transferred;

* * * * *

§ 155.800 [Amended]

43. In § 155.800, in the section heading, by removing the word "Oil" and, in the text, by adding after the word "oil" the words "or hazardous material".

§ 155.805 [Amended]

44. In § 155.805(a), by removing the word "oil" before the word "transfer" and by adding after the words "transfer of oil" the words "or hazardous material".

§ 155.815 [Amended]

45. In § 155.815(a)(5), by adding after the word "oil" the words "or hazardous material".

§ 155.820 [Amended]

46. In § 155.820(a), by removing the word "oil".

PART 156—[AMENDED]

47. The authority citation for Part 156 is revised to read as follows:

Authority: 33 U.S.C. 1231, 1321(j)(1)(C) and (D); sec. 2, E.O. 11735, 38 FR 21243, 3 CFR 1971–1975 Comp., p. 793; 49 CFR 1.46. Subpart B also issued under 46 U.S.C. 3715(b).

48. By revising the heading of Subpart A to read as follows:

Subpart A—Oil and Hazardous Material Transfer Operations

49. By revising § 156.100 to read as follows:

§ 156.100 Applicability.

This subpart applies to the transfer of oil or hazardous material on the navigable waters or contiguous zone of the United States to, from, or within each vessel with a capacity of 250 barrels or more; except that, this subpart does not apply to transfer operations within a public vessel.

§ 156.107 [Amended]

50. In § 156.107(a)(3), by adding after the word "oil" the words "or hazardous material".

§ 156.110 [Amended]

51. In § 156.110(a)(2)(ii) and (a)(2)(iii), by adding after the word "oil" the words "or hazardous material".

52. In § 156.112, in the introductory text, by removing before the word "transfer" the word "oil" and by adding after the words "discharge of oil" the words "or hazardous materal"; by revising paragraph (c) to read as follows; and, in paragraph (d), by adding after the word "oil" the words "or hazardous material":

§ 156.112 Suspension order.

* * * * *

(c) Includes a statement of each condition requiring correction to—

(1) Prevent the discharge of oil or hazardous material; or

(2) Comply with § 154.735 of this chapter; and

* * * * *

§ 156.113 [Amended]

53. In § 156.113(a), by removing the word "oil".

§ 156.115 [Amended]

54. In § 156.115, by removing the word "oil" wherever it appears.

§ 156.118 [Amended]

55. In § 156.118, in the section heading, the introductory text for paragraph (a), and paragraphs (a)(4), (b), and (c), by removing the word "oil" wherever it appears and, in paragraph (a)(3), by adding after the word "oil" the words "or hazardous material".

§ 156.120 [Amended]

56. In § 156.120, in the section heading, by removing the word "oil"; in the introductory text, by removing the words "an oil" and adding, in their place, the word "a"; in paragraph (b), by removing the word "oil" wherever it appears; in paragraph (d), by removing before the word "transfer" the word "oil"and by adding after the words "flow of oil" the words "or hazardous material"; in paragraph (e), by removing the word "oil"; in paragraph (f), by adding after the word "oil" the words "or hazardous material"; in paragraph (h), by removing the word "oil"; in paragraph (i), by removing before the word "transfer" the word "oil" and by adding after the words "discharge of oil" the words "or hazardous material"; in paragraph (p), by removing after the words "All connections in the" the word "oil" and by removing the words "component in an oil" and adding, in their place, the words "component in the"; in paragraphs (t)(1), (t)(2), (t)(3), (u), and (v) and in the introductory text for paragraph (w), by removing the word "oil" wherever it appears; in paragraph (w)(7), by adding after the word "oil" the words "or hazadous material"; and in paragraph (x), by removing the word "oil" wherever it appears.

§ 156.125 [Amended]

57. In § 156.125, in the section heading, by removing the word "oil"; in paragraph (a), by removing the words "an oil" and adding, in their place, the word "the" and by adding after the words "whenever oil" the words "or

hazardous material"; in the introductory text for paragraph (b), by removing the words "an oil" and adding, in their place, the word "the"; and in paragraphs (b)(1), (b)(2), and (c), by adding before the word "discharged" the words "or hazardous material" and by removing before the word "transfer" the word "oil".

§ 156.130 [Amended]

58. In § 156.130, in paragraphs (a), (b), and (c), by removing the word "oil" and, in paragraph (d), by adding after the word "oil" the words "or hazardous material".

§ 156.150 [Amended]

59. In § 156.150, in paragraph (a), by adding after the word "oil" the words "or harardous material"; in paragraphs (c)(5) and (e), by removing the word "oil" wherever it appears; and, in paragraph (f), by removing the words "an oil" and adding, in their place, the word "the".

§ 156.160 [Amended]

60. In § 156.160, in paragraph (a), by removing the words "an oil" and adding, in their place, the word "the"; in paragraph (b), by adding after the word "oil" the words "or hazardous material"; and, in paragraph (c), by adding after the words "transfer oil" the words "or hazardous material" and by removing the word "oil" before the words "transfer personnel".

§ 156.170 [Amended]

61. In § 156.170, in paragraphs (a), (c)(1), (c)(4), and (d), by removing the word "oil" before the word "transfer" and, in paragraph (c)(1)(i), by adding after the word "oil" the words "or hazardous material".

§ 156.205 [Amended]

62. In § 156.205(b), by removing the definitions for the words "hazardous material" and "oil".

Dated: April 23, 1990.

J.D. Sipes,

Rear Admiral, U.S. Coast Guard, Chief, Office of Marine Safety, Security and Environmental Protection.

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