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A COMPARISON OF MEDICARE PHYSICIAN FEES, PHYSICIAN CHARGES, FEES OF OTHER PAYORS, AND MODEL MEDICARE FEE SCHEDULE AMOUNTS

Final Report

in cooperation with
Boston University

Center for Health Economics Research

Urban Institute

Administrative Offices at:
Heller Graduate School
Brandeis University
415 South Street
Waltham, Massachusetts
02254-9110
(617) 736-3900

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Final Report

Submitted by:

Gregory C. Pope, M.S.
Jerry Cromwell, Ph.D.
Stephen M. Davidson, Ph.D.
Janet Mitchell, Ph.D.

Center for Health Economics Research
300 Fifth Avenue, 6th Floor
Waltham, MA 02154

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EXECUTIVE SUMMARY

1.0 INTRODUCTION

This report examines Medicare fees relative to physician charges and what other insurers pay. The report is divided into two parts. The first part utilizes a 1984 nationwide survey that asked physicians what they charged and were paid by various insurers for specified services. National, urban-rural, and regional comparisons of 1984 physician charges, Medicare fees, Blue Shield fees, commercial insurer fees, and Medicaid fees by specialty for various services are made. The second part compares 1988 physician charges, Medicare fees, simulated Model Medicare Fee Schedule* amounts, and commercial insurer fees for 24 selected surgical and medical services in 29 urban and rural areas in 11 states.

2.0 COMPARISON OF 1984 FEES OF DIFFERENT PAYORS

The first part of the report establishes that a consistent fee hierarchy exists among the different insurers. In 1984, on average, Medicare paid about 75 percent of physicians' usual charges, 85 percent of commercial insurer fees, 90 percent of Blue Shield fees, and 170 percent of Medicaid fees. The ordering of insurers in this fee hierarchy was quite stable across services and specialties, but the magnitude of the Medicare discount relative to the other fees varied somewhat. Medicare was generally as competitive for the services of specialists as less specialized physicians. By comparing relative fees with results from a 1976 physician survey, we found some evidence that

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*The Medicare "Model Fee Schedule" was published on September 4, 1990 in the Federal Register, GPO stock number 069-00-00023-8. The simulated Medicare Fee Schedule amounts used in this report differ slightly from the model fee schedule amounts because a different area basis for the geographic adjustment factor is used for analytic purposes (see Section 9.4).

Medicare fees declined relative to other fees (excepting Medicaid) from 1976 to 1984.

Although all fees were considerably lower in rural areas, 1984 Medicare fees were in the same relation to usual charges, commercial, and Blue Shield fees in rural as in urban areas. We found no evidence that Medicare is "unfair" to rural physicians as opposed to urban physicians, or that rural beneficiaries' access to care is restricted as a result of relatively less generous Medicare payment in rural areas.

3.0 1988 FEE COMPARISON

In the second part of the report, we find that in 1988, Medicare paid about 72 percent as much as commercial insurers on average for the 24 services we studied.* Among services, average Medicare allowed charges ranged from 60 percent to 87 percent of average commercial insurer allowed charges. Medicare paid most generously relative to commercial insurers for coronary artery bypass grafts (86 percent as much), psychotherapy (81 percent as much), and ECG with report (82 percent as much). Medicare was least competitive for total hysterectomy, paying 60 percent as much.

3.1 Implications of the Model Medicare Fee Schedule for Services

The implementation of the MFS will cause significant realignments in the relationship between Medicare and commercial fees if commercial fees do not change. Our simulations based on the model MFS show, on average, the Medicare allowed charge as a percentage of the commercial allowed charge falling from 73 percent to about 60 percent for surgical services, whereas for medical

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*The large difference from the relative fees we found in 1984 (Medicare pays 85 percent as much as commercial insurers in 1984) could be due to several factors--the data source, methodology, and time period are quite different. However, the major source of the discrepancy seems to be the exclusion of the patient copayment from the commercial insurer fee in 1984 because of the wording of the physician survey question.

services, the average rises from 72 percent to 77 percent. For example, Medicare coronary artery bypass graft fees would fall from 86 percent as much as private fees to as low as 58 percent. Under the MFS, Medicare payments for the 24 services we study will range from 44 percent to 87 percent as much as the average private fee. The two general surgical procedures, total hysterectomy and inguinal hernia repair would be less than half of the average commercial fee under the MFS. Conversely, two office visits (CPT-4 90060 and 90070) will be paid 87 percent as much, on average.

Among medical services, office and hospital visit fees will rise so that under the simulated MFS, Medicare will pay at least three-quarters as much as commercial insurers for all visits we study, except limited subsequent hospital care. For several visits, Medicare will be paying 90 percent or more of physicians' 1988 submitted charges, on average. However, two medical services we studied--eye exam and treatment and ECG with report--will see reductions. The reduction for ECG will be particularly sharp, from 82 percent to 55 percent of the commercial fee.

3.2 Implications of the Model Medicare Fee Schedule for Areas

Among areas, the MFS tends to lower fees in the very largest metropolitan areas and raise them in nonmetropolitan areas. Simulated MFS fees are a constant percentage of the mean commercial fee, 76 percent, on average, in the largest metropolitan areas in nine states, but rise from 74 to 77 percent in smaller metropolitan areas, and from 78 to 79 percent in nonmetropolitan areas. The model MFS will pay more, on average, than physicians' submitted charges for medical services in several nonmetropolitan areas and more than the average commercial medical service fee in rural Alabama. A specific example: in rural Alabama, the MFS will pay $47 for extended subsequent hospital care (CPT-4 90270), which is 38 percent more than physicians' average submitted charge of $34 and 53 percent more than the average commercial fee of $31. Medicare's generosity occurs despite an assignment rate of 94 percent at the 1988 average allowed charge of $26.

In Manhattan, New York, Medicare fees will fall to 56 percent of commercial insurer fees and 55 percent of what physicians charge, from 70 percent and 68 percent, respectively, in 1988. Simulated Manhattan MFS amounts for gallbladder removal, inguinal hernia repair, and total hysterectomy are only 35 percent, 32 percent, and 24 percent, respectively, of the simulated average commercial fee. Manhattan is one of only two areas we study where average Medicare fees for medical services will fall under the MFS, dropping from 71 percent to 60 percent of commercial fees. Average medical fees will also fall in Los Angeles, but the decline is only 4 percent and its 1988 percentage of Medicare claims accepted on assignment is much higher than Manhattan's (87 percent versus 74 percent).

Medicare will be more competitive in buying medical services than surgical services in all areas. For medical services, mean Medicare fees relative to mean private fees in the largest metropolitan, other metropolitan, and nonmetropolitan areas in nine states are 86 percent, 87 percent, and 93 percent, respectively, but only 66 percent, 67 percent, and 66 percent for surgical services. Medicare will become much more competitive for one surgical service we examine, however, as the MFS will raise sigmoidoscopy fees by an average of 39 percent. The MFS amount for sigmoidoscopy exceeds average commercial fees and submitted physician charges in several areas.

For further discussion of the results of our 1988 fee comparisons, the interested reader in referred to Sections 10.1 and 10.2 where summary tables for services and areas are presented and discussed. Section 10.1 describes summary results for individual services averaged across areas. Section 10.2 considers summary results by area for averages of surgical services, medical services, and all services.

3.3 Exceptions to Generalizations

The changes the MFS will cause in Medicare fees for a service in an area depend on:

- the current Medicare fee level in the area;

- the MFS relative value units for the service; and
- the MFS geographic adjustment factors for the area.

(This is assuming a budget neutral MFS.) The interaction of these three factors can create exceptions to the generalizations we have noted. For example, even though total hip replacement has been regarded as an "overpriced" procedure, the model MFS will raise hip replacement fees in Milwaukee by 25 percent, from $1,699 to $2,117. Similarly, the fee for another "overpriced" procedure, cataract surgery (CPT-4 66984), will increase in Newark, New Jersey, from an average of $1,234 to $1,401 under the MFS, even though it falls in most areas. Total hysterectomy is paid poorly on average under the MFS, but its fee in rural Washington will rise by 6 percent, from $735 to $777.

On average, visit fees are increased substantially in rural areas by the MFS. Nevertheless, the model MFS fee for a comprehensive office visit with a new patient falls by 22 percent in rural Wisconsin (from $73 to $57), 16 percent in rural Washington (from $72 to $61), 14 percent in rural Oregon (from $70 to $60), and by 5 percent in rural Arizona (from $63 to $60), in spite of below-average assignment rates in all these areas. The fee for a limited office visit with an established patient rises by an average of 14 percent in the areas we study, but it declines by 28 percent in Manhattan and about 6 percent in Connecticut. Even in Manhattan, where most fees will fall, the MFS amount for comprehensive initial hospital care, $112, is 47 percent greater than the 1988 average Medicare allowed charge of $76.

The exceptions to the generalizations point to the need for careful analysis before reaching conclusions about fee changes for particular services in particular areas.

3.4 Caveats to 1988 Comparisons

There are three important caveats to our 1988 Medicare/commercial insurer fee comparisons. First, the simulated model MFS amounts used in the comparisons are expected to change by the actual implementation in 1992. They

do not reflect the provisions of OBRA 1990 (P.L. 101-508). Relative values, geographic adjustment factors, and the overall conversion factor are all subject to revision. Thus, the MFS amounts used in this report do not necessarily reflect the amounts that will actually be paid.

Second, we lacked data on what commercial insurers actually paid for physician services (i.e., allowed charges). We simulated commercial allowed charges from the charges physicians submit to commercial insurance companies. We believe that our simulated fees are a good representation of commercial allowed charges. Nevertheless, they are only an approximation and do not capture differences in the degree of commercial insurer discounting of physician charges across areas. Nor do they reflect the payments of such "non-traditional" forms of reimbursement as fee schedules or capitation organized through an independent practice association or preferred provider organization.

Third, our comparisons assume no competitive response on the part of commercial insurers to the MFS. But surely there will be a response, albeit with a lag and at different rates in different parts of the country. If commercial insurers modify their reimbursement practices to more closely resemble the MFS, the relationship between Medicare and commercial fees will be disrupted much less than is indicated by our comparisons.

3.5 Implications of the Medicare Fee Schedule for Access

A complete analysis of the implications of our fee comparisons and simulations for the access of Medicare beneficiaries to physician services is beyond the scope of this report. The effect of the MFS on access will depend on a large number of factors, including the sensitivity of physicians to relative fees in providing services, the market shares of competing insurers, the competitive response of other insurers to the MFS, the availability of alternative providers, the ability of Medicare beneficiaries to pay for services out of pocket, the influence of fees on the geographic location of physicians, and the balance billing limits of the MFS. By raising fees, the MFS may improve access for visits and in rural areas, while possibly lessening

access by lowering fees for surgical services and in the largest cities. Among the areas we studied, the largest MFS fee reductions will occur in Manhattan, New York. Also, Los Angeles and Arizona will see sharp reductions in Medicare surgical fees.

Among surgical services, the model MFS amounts for hernia repair and hysterectomy appear to be the least competitive. Although it is difficult to generalize from our small sample of services, these are both "garden variety" surgical procedures performed primarily by general surgeons. Medicare's lower market share for these procedures than for some others heightens access concerns about low relative MFS amounts.

We believe that if access will be a problem anywhere under the MFS, it is likely to be in areas or for services for which Medicare fees are low relative to other insurers and Medicare has a small market share. High 1988 assignment rates, averaging around 70 percent, indicate good access for Medicare beneficiaries in most places. Historically, even though Medicare has discounted charges much more than commercial insurers, its beneficiaries have received a large volume of services, even in areas such as Manhattan where Medicare appears to be least competitive. To ensure equal access, it would make sense to raise Medicare fees where assignment rates are low, and lower them where they are high. This is because a low assignment rate theoretically indicates strong competing demand from other insurers, while a high assignment rate theoretically indicates weak private demand. However, even where assignment rates are high, the MFS raises some Medicare fees above private fees and physicians' charges, and it lowers other fees where Medicare is least competitive and few claims are accepted on assignment. In short, the significant changes under the MFS are occurring with little consideration of Medicare's competitive position vis-a-vis other purchasers of physician services.

A Comparison of 1984 Medicare Physician Fees to Usual Physician Charges and Fees of Other Payors

1.0 INTRODUCTION

1.1 Statement of the Problem

Historically, the Medicare program has sought to maintain a balance between controlling outlays while paying physicians enough to provide access for its beneficiaries. Since Medicare competes with other insurers for the physician's time, payment must be sufficient to attract physicians away from the usually higher-paying private insurance market and into the public market. When the Medicare program was first implemented in 1966, physicians were in scarcer supply and Medicare physician payment was relatively generous. Over time, however, program expenditures skyrocketed, and constraints were placed on the rate at which fees were allowed to increase. Since the supply of physicians was also increasing during this time period, Medicare payment rates remained competitive. Data from the 1970's, for example, show that Medicare reimbursed physicians at rates only slightly below those offered by Blue Shield plans for the same service (Sloan, Cromwell, and Mitchell, 1978).

Beginning in 1984, however, Medicare fees were frozen for two years, while private insurer fees continued to rise (although the exact rate of increase is not known). Subsequent Medicare fee updates have been modest and payments for selected surgical procedures have actually been rolled-back. We no longer know exactly how generous (or how penurious) Medicare is, relative to other insurers.

Given that there is no evidence that physicians are dropping out of the Medicare program, why are these relative fee differences important? Congress has just passed legislation that makes fundamental changes in the way Medicare pays physicians, and these changes may widen the fee differences even further in some instances. Beginning in 1992, Medicare will implement a fee schedule

that is modelled on the Resource-Based Relative Value Scale (RBRVS). Payment for visits and other primary care services will rise substantially, while that for most surgical procedures and certain tests will decline. By knowing how much Medicare pays for a service compared with private insurers, we can estimate how much the gap will widen (or narrow) under the fee schedule and whether access may be constrained as a result.

Before proceeding with the analysis, we discuss the institutional factors that determine how fees are set. Relative fee differences are not random, but reflect a hierarchy that has been predetermined by the payment policies and regulations of the various insurers.

1.2 Institutional Factors in Fee-Setting

The reimbursement policies of third-party payors yield a distinct hierarchy of physician fees. Physicians' actual charges are always highest, followed by the payments of commercial insurers and Blue Shield plans. Medicare prevailing charges offer the next best payment for services, while Medicaid is consistently the lowest. How does this occur?

The physician's usual charge will always be higher than the amount reimbursed by third-parties, as virtually no insurer makes a practice of simply paying every physician his (her) stated fee. Some insurers have developed fairly elaborate methods for determining allowed charges, e.g., the "usual, customary, and reasonable" (UCR) criteria developed by Blue Shield, while others rely on fixed fee schedules. (The physician's usual fee may be one of the criteria used in determining the allowed charge, however.)

Under UCR, the fees historically charged by individual physicians are termed their usual fees, while the historical charges for similar physicians in the community are the customary fees for that area. Physicians are reimbursed the lesser of: (1) their actual charge; (2) their usual fee; or (3) some specified percentile of the distribution of customary charges in their geographic area. This percentile level, or ceiling, is determined by each Blue Shield plan. Evidence from the 1970's suggested that customary fee

levels were established around the 88th percentile (IOM, 1976). Because the UCR methodology is highly inflationary, many Blue Shield plans have constrained the rate of increase in the customary charge updates to the CPI. It is thus possible that the charge screens have often fallen below the 88th percentile.

For competitive reasons, commercial insurers do not publicly describe how they determine payment amounts. It is generally believed, however, that maximum payment levels are based on the 90th percentile of charges in a given area (personal communication, Jon Gabel, HIAA). Physician charges below this ceiling are paid in full.

Medicare uses the "customary, reasonable, and prevailing" (CPR) methodology to reimburse physicians, which is essentially an adaptation of the Blue Shield UCR payment method. Reimbursement is based upon the "reasonable" charge for a specific service in a given community. Medicare defines a reasonable charge as the lesser of: (1) the actual charge for the service; (2) the physician's customary charge for the service (i.e., the usual charge in Blue Shield terminology); or (3) the prevailing charge. The prevailing charge is the maximum allowable payment set by Medicare and corresponds to the ceiling on customary charges used by Blue Shield. The Medicare prevailing charge is currently established at the 75th percentile of usual and customary charges in a given geographic area. Updates to prevailing charges are constrained by the annual rate of increase in the Medicare Economic Index (a measure of inflation in physician practice costs). Since Medicare fees may not exceed those of the Part B carrier for that area, Medicare reimbursement levels are effectively set below those of the private market. Of the 56 carriers serving the U.S., 33 are operated by Blue Shield plans and the remainder by commercial insurance companies.

Medicaid reimbursement policies are the responsibility of the individual state governments; the only federal requirement is that Medicaid payment levels not exceed corresponding reimbursement levels for Medicare. States use a variety of different methods to set rates; some use CPR methods similar to those of Medicare, while others have fixed fee schedules. Over the last

decade, there has been an increased use of fee schedules for Medicaid payment; as of 1984, only eleven states were still using CPR principles to set physician fees (Cohen, 1989).

1.3 Overview of Report

After this introductory chapter and a theoretical model of physician pricing under alternative insurance plans in Chapter 2, the report is divided into two parts. Part I documents relative fee differences as of 1984, based on a national survey of physicians who reported their usual fees, commercial insurer payments, Blue Shield reimbursement, Medicare allowed charges, and Medicaid fee schedule amounts. These data provide same source information on fees, i.e., the different fees are reported by the same physicians. Data sources and methods for Part I are described in Chapter 3, including a detailed discussion of data cleaning and other edits that were employed. Our descriptive comparisons of Medicare fees relative to those of other insurers are presented in Chapter 4, while regression results seeking to explain these differences are shown in Chapter 5. We conclude Part I in Chapter 6 with a discussion of what these results imply for future Medicare payment changes.

The fee comparisons in Part I are of limited importance because the 1984 data are not current, the small sample sizes preclude fee comparisons for specific geographic areas, and no comparisons to Medicare Fee Schedule (MFS) amounts are made. Part II of the report overcomes these limitations by comparing 1988 Medicare charges, simulated MFS amounts, and commercial insurer charges for specific areas using large claims databases. Part II is organized as follows. After an introduction in Chapter 7, Chapter 8 describes the Medicare and commercial insurer charge databases used to compute physician fees. Chapter 9 explains the methods used to commute and compare Medicare submitted and allowed charges, commercial insurer submitted and allowed charges, and MFS amounts, including the areas and services chosen for comparison. Chapter 10 presents the comparisons, beginning with summary tables for services and areas. Then, fee comparisons for specific surgical

and medical services for specific areas are displayed and discussed. Conclusions and implications are given in Chapter 11.

2.0 A MODEL OF PHYSICIAN PRICING UNDER ALTERNATIVE INSURANCE COVERAGES

To explain relative fee differences across insurers, consider a model of the price discriminating monopolist. Let us assume for simplicity two markets, one for Medicare and another for privately insured patients.* Let us further assume that the physician is participating in the Medicare 100 percent assignment program and accepting the customary or prevailing charge as payment in full. In the private market, demand is downward sloping, although it is rotated up around point T (see line AYBT in Figure 1) by the amount of the insurer's copay (usually 80 percent). The dotted line, AXTR, represents marginal revenue in this market. If we assume that the Medicare allowable charge equals the prevailing, P_{75}, then the physician can see a substantial number of patients at a gross price = P_{75}. If the physician's supply curve is represented by S = marginal cost,*** then she will provide Q_T services in total, divided into Q_p visits to privately insured patients and $Q_T - Q_p = Q_m$ visits to Medicare patients on assignment. Average price in the private market will therefore be GP. This equilibrium allocation of visits and prices derives from a revenue maximization decision for each output level. First-order conditions for a maximum require that (a) marginal cost = marginal revenue, and that (b) marginal revenue be equal in both markets (otherwise the physician could reallocate visits and obtain more revenue without working any harder). This model also assumes a specific sort of <u>institutional</u> price

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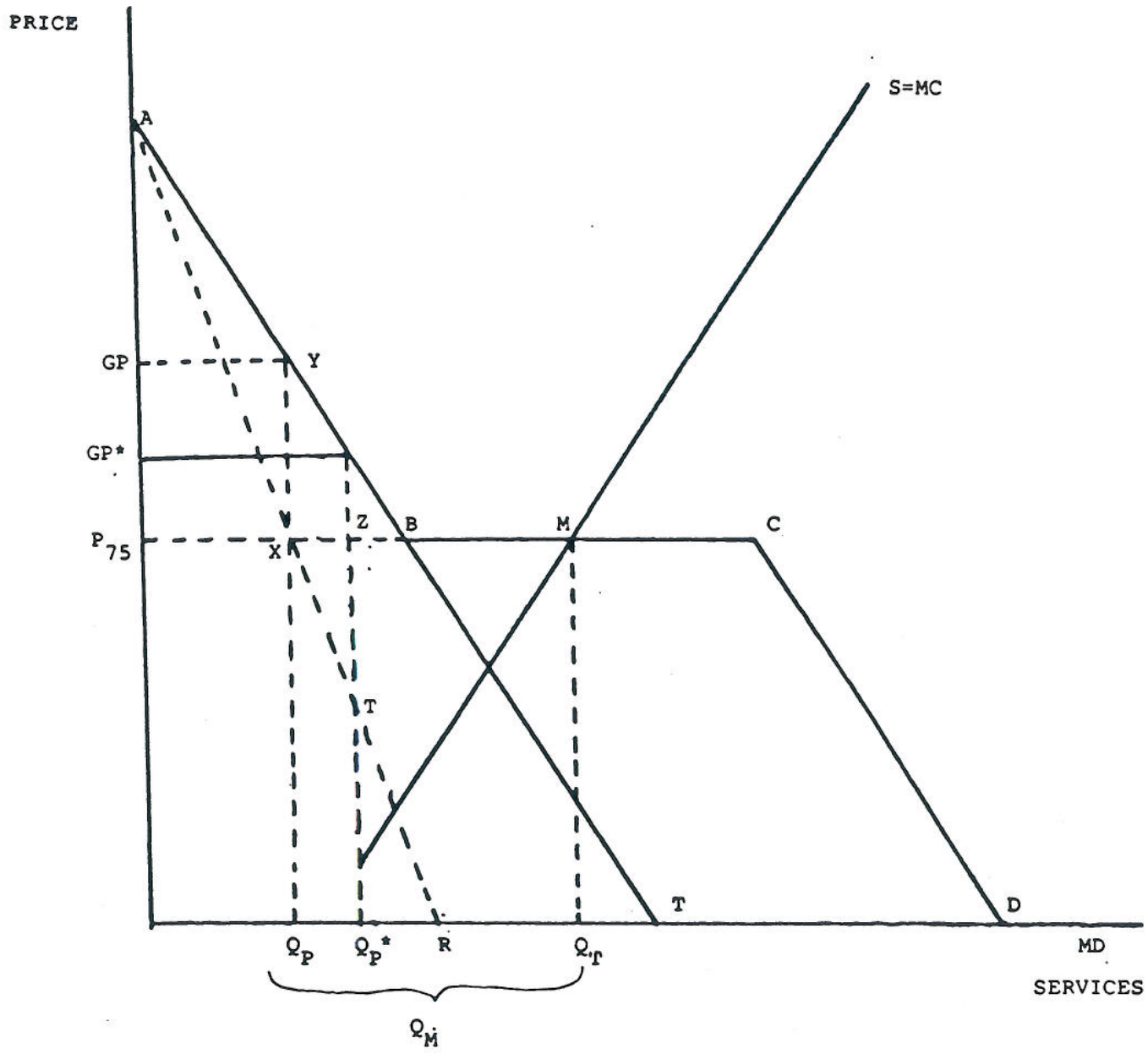
*For a more complete exposition of the institutional price discrimination model for physician services, see Sloan, Cromwell, and Mitchell (1978) or Mitchell and Cromwell (1982).

**Although a monopolist does not normally have a supply curve and simply chooses a single optimal price-quantity combination, that fact that Medicare allowable charges are determined exogenously justifies the use of an independent supply response.

FIGURE 1

A MODEL OF PHYSICIAN RELATIVE FEES



discrimination which permits separate pricing between the Medicare and private markets but not within the private market by patient. Thus, private price, GP, is charged every patient in the private market.*

In this model of a single physician seeing both Medicare and private patients, the relative price = P_{75}/GP is less than one and the Medicare "discount" on the usual fee = $(P_{75}/GP) - 1$. Assuming no price constraints imposed by the private insurer, GP can be considered the maximum allowable charge for this physician. It is not infinite because we assume that patients are still paying some copay (which is included in GP).

What the physician might report as her usual fee is another question. Logically, it should be GP, the price charged all private patients, but a case could be made for point A at the top of the private demand curve. It is reasonable for physicians to state a "usual" fee equal to the most a single insured patient would be willing to pay (i.e., A dollars) in order to insure that private insurers never pay below GP. This could happen under Usual, Customary, and Reasonable payment methods where the insurer pays the lesser of actual charges or UCR limits. This possibility adds idiosyncratic "noise" to the analysis of Medicare versus usual fees.

Ignoring this problem, however, one can draw some fairly strong conclusions about relative fees, particularly if the Medicare allowable charge in a community were determined nationally. We relax this unreasonable assumption later. First, the Medicare usual-fee discount and "payment differential" from private insurer allowable fees will be greater in areas (or for individual physicians) with stronger private demand. Private demand, in turn, will be a positive function of insurance coverage and per capita income

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*It is generally thought that the physician services market exemplifies the concept of price discrimination (Kessel, 1958; Cromwell and Burstein, 1985; Mitchell and Cromwell, 1982, pp. 251-2). If the physician does not charge a single price to all her private patients but, rather, was a perfect price discriminator then marginal = average revenue and she does not begin to treat Medicare patients on assignment until point B in Figure 1. Price discrimination prevents a simple interpretation of "usual fee," as discussed later in the text.

or wealth, and a negative function of health status and physician competition. Greater breadth and depth of private coverage rotates the demand curve outwards. Both would lead to higher private fees for a fixed Medicare allowable charge. It would also encourage the physician to shift her services away from Medicare to the private market, although no more patients would be seen in total assuming no "income effects" in the supply curve.*

Better health status in the community and/or more physicians per capita would have the opposite effect of shifting in private demand. Thus, in "healthy" communities blessed with many competing physicians, Medicare-private fee differentials should be narrower.

The supply of physicians services could also have an effect on Medicare fee discounts but only in a limited way. So long as supply intersected the horizontal portion of the demand curves, that is, so long as the physician was accepting Medicare patients on assignment, the Medicare discount on usual fees would be unaffected by the physician's or practice's characteristics, ceteris paribus. Thus, Medicare "discounts" should be relatively insensitive to physician characteristics such as age, sex, and FMG status--although they could reflect systematic demand-side differences.

The impact of participation (100 percent assignment) on Medicare discounts is more predictable. Physicians with strong individual demands will be less likely to take all Medicare patients on assignment. Hence, their reported Medicare discount rates should be higher, or alternatively, their own Medicare allowable fee should be relatively low compared to their usual fee.

The major limitations to this simple model are: (1) private insurers do not always pay un-discounted charges; and (2) the Medicare allowable charge under CPR is not independent of private demand in a community. Regarding the first complication, assume that private insurers pay allowable charges only up to GP* but no higher. This implies constant private marginal revenue through

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*If the physician placed a high value on leisure time, supply could be backward sloping in areas of strong private demand. This could result in fewer services provided in both markets.

output, Q_p*.* Surprisingly, the theory of a price-constrained monopoly implies more output being provided in this market and less in the Medicare market (again assuming no "income effects" on the supply side). One way of explaining this result is to think of the physician seeing more private patients, which are still more lucrative than Medicare patients, to make up for a lower fee on each one. With private insurer discounting, a wedge is driven between private insurer and usual fees. How much of a differential depends upon insurer "generosity," which is difficult to predict.

The second complication incorporates the interdependence of Medicare and private fees. Historically, Medicare's CPR payment system has been based on local fees. Areas with higher private fees are associated with higher Medicare CPR allowable charges so as to assure beneficiary access to mainstream physicians in the local community. In terms of Figure 1, the horizontal Medicare prevailing, P_{75}, becomes a function of GP in the private market. The one absolute constraint is that the Medicare prevailing fee cannot be higher than the private insurer allowable fee, or GP*. Except for some relatively minor effects, there will be little geographic difference in the Medicare payment differential; thereby limiting the usefulness of cross-sectional variables such as insurance coverage, income, and physician competition in explaining such differentials. The primary cross-sectional differences come from (a) private insurer discounting, which is fairly unpredictable, and (b) geographic differences in the growth in private demand. Because local Medicare prevailings are updated by a national Medicare Economic Index (or MEI), areas experiencing rapid growth in insurance coverage, income, and/or changes in physician availability will show increasing divergence from Medicare allowable charges. This suggests that changes in underlying demand factors, rather than levels per se, could be better predictors of Medicare payment differentials.

Technically, marginal revenue = GP through private output = Q_p* then shifts down to segment TR.

So far the model has ignored specialty differences. They can be incorporated as shifts in private demand accompanied by some raising or lowering of the local prevailing in areas that recognize specialty fee differences. Although the model can address such differences on an individual provider level, varying specialty mixes across areas adds further "noise" to the explanation of Medicare fee differentials. This could be controlled for by conducting the analysis by specialty.

Nor has the model explicitly incorporated Medicaid fees. They can be added to the model as another horizontal portion near the bottom of the demand curve along line segment, CD. The physician modelled in Figure 1 would not accept any Medicaid patients and would therefore not report any Medicaid fees--at least in the NORC survey. Were physician supply shifted enough to the right so as to intersect the horizontal Medicaid fee, then the full range of fees--usual, private insurer, Medicare, and Medicaid--would be reported. But, again, note the inverse relationship between private demand and participation in Medicaid. Physicians facing very strong private demand may not even report Medicaid fees because they have few or no Medicaid patients in their practice. This form of reporting bias in the HCFA physician survey probably tends to narrow private-Medicaid fee differentials. If "non-Medicaid" physicians reported their (presumably higher) usual fees along with the local Medicaid fees, the estimated differential would be greater.

Except that the Medicaid fee must be equal to or below the Medicare fee, we know little about the factors behind the setting of Medicaid physician allowables. While similar methods were often used historically in the Medicare and Medicaid programs, most states have long since diverged from CPR methods and use fixed fees that may bear little relation to private demand (Cromwell, Hurdle, and Schurman, 1986; Holahan, 1984; HCFA, 1988).

PART I: A COMPARISON OF 1984 MEDICARE PHYSICIAN FEES TO USUAL PHYSICIAN CHARGES AND FEES OF OTHER PAYORS

3.0 DATA SOURCE AND LIMITATIONS

To compare fees of different payors, we used the Physician Practice Cost and Income Survey (PPCIS) conducted in 1984 by the National Opinion Research Center (NORC) for HCFA. A stratified national sample of 4,729 physicians in all specialties were interviewed. Fees were reported by subsets of physicians for each of twenty-one services defined by CPT-4 codes, most of which were performed by a single specialty.

3.1 The Number of Usable Responses

The number of usable responses to the PPCIS fee questions was affected by several factors. First, the weighted overall response rate to the PPCIS overall equalled 69.7 percent. Although the original sample was representative of the physician population, it is possible that respondents to the survey were not. Reassuringly, NORC staff did a number of comparisons between respondents and non-respondents and failed to find significant differences in the groups on those items for which data were available.

Second, the fee questions were asked only of those physicians who were self-employed, partners in a group practice, or part-owners of a practice. The 1357 physicians (28.7 percent) who were employed by a hospital, clinic, HMO, another physician, or a corporation were, therefore, excluded, leaving 3,372 physicians or 71.3 percent of the respondents. This limitation is justified for two principal reasons: one is that, since employed physicians do not bill patients separately, they are less likely to know either the usual fee billed by their employer or the payment made by a particular payor. Even more important is the fact that the nature of the incentives is different for employed physicians than for those who are self-employed or partners. To the

extent that physicians are influenced by financial considerations, those whose income depends directly on the fees generated by services they themselves provide are likely to behave differently than those whose income is affected only indirectly by their own work.

A third factor that affected the number of respondents is that for each service (i.e., visits and procedures identified by CPT-4 codes), physicians were asked to identify their "current usual fee." Under certain circumstances, physicians did not reply:

(1) when they did not provide that service,

(2) when the fee was included in other charges (e.g. follow-up visits after surgery), or

(3) when they did not know the answer.

In these circumstances, the physician was skipped out of the remainder of the fee questions for that service.

Fourth, some physicians did not provide a fee for each payor. Physicians were asked to identify a fee paid by each of four major payors. The particular question varied somewhat by payor, as follows:

1. "What is Blue Shield's <u>maximum allowed charge</u> for ... ?"

2. "How much does the major private insurance company pay you for ... ?"

3. "What is <u>Medicare's reasonable charge or allowance, including patient copay</u>, for ... ?"

4. "How much does Medicaid pay for ... ?"

When a physician had no patients from that payor, he probably did not answer, further reducing the number of item respondents. That occurred when the physician did not receive payments from a particular payor either because he had no patients covered by that insurer, the particular payor did not cover the service, or the physician did not remember a particular payment amount. In those instances, the physician skipped the question, and the field was labeled "missing." As a result, the number of respondents for the several fee questions vary. In the results that follow, means for each payor were

calculated using all responses for a particular question. When comparisons were made between two payors, however, only those physicians who responded to the questions for both were considered.

In addition to these reasons for the varying number of respondents, edits were performed which reduced the numbers still further. All cases were excluded in which the physician's usual fee or the reported payment, regardless of payor, was less than $5 (5 cases). Also, cases where a physician reported a usual fee lower than a third-party payor's fee (344 cases), or a Medicare fee lower than a Medicaid fee (249 cases), were excluded. Finally, fees were excluded that appeared not to be credible payments for the services involved (i.e., 104 high and low outliers were eliminated). These edits eliminated a relatively small amount of data because:

(1) When an unacceptable response was found, only that physician's responses to the fee questions for the particular procedure containing the anomalous response were excluded; and

(2) many of the responses that were excluded failed several of the edit checks, so that the total number of excluded cases is much less than the sum of cases excluded by individual edits. For example, 69 of the 104 outlier cases failed one of the other edits as well.

One specialty, pediatrics, was dropped from the analysis entirely because pediatricians see few Medicare patients. They were, however, included in the regression analysis (Chapter 5).

Table 1 shows that the number of usable response to each fee question by specialty and payor. The mean fees presented in the following section are based on these responses. The number of self-employed physicians who responded to the PPCIS, by specialty, is also shown because this is the group that could have potentially provided a usable fee response. For example, 198 self-employed general practitioners responded to the PPCIS. Of this group, 150 provided a usable usual charge for an intermediate office visit, 54 a usable Blue Shield fee, 73 a usable private insurer fee, 102 a usable Medicare fee, and 85 a usable Medicaid fee. Although the usable response rate varies by procedure and specialty, generally roughly three-quarters of self-employed

TABLE 1

USABLE RESPONSES TO 1984 PPCIS FEE QUESTIONS BY PROCEDURE, SPECIALTY, AND PAYOR

		USABLE FEE RESPONSES				
	Self-Employed Physicians	Usual	Blue Shield	Private	Medicare	Medicaid
Intermediate Office Visit (CPT-4 90060)						
General Practice	198	150	54	73	102	85
Family Practice	369	289	118	162	216	191
Internal Medicine	365	294	122	170	244	181
Cardiovascular Disease	120	100	49	59	78	54
Other Internal Specs.	206	161	78	107	124	103
General Surgery	221	157	55	77	111	101
Orthopedic Surgery	135	111	50	74	74	57
Opthalmology	135	107	49	54	80	62
Urology	147	119	65	77	97	80
OBGYN	234	193	72	105	99	94
Other Surgery	152	113	43	55	80	64
Other Specialties	114	56	34	44	36	36
All Specialties*	2,396	1,850	789	1,057	1,341	1,108
Follow-up Hospital Visit (CPT-4 90260)						
General Practice	198	128	55	71	77	61
Family Practice	369	289	165	190	204	169
Internal Medicine	365	289	167	187	226	163
Cardiovascular Disease	120	99	61	61	75	53
Other Internal Specs.	206	154	86	106	111	75
General Surgery	221	107	53	67	72	61
Orthopedic Surgery	135	78	46	56	47	34
Opthalmology	135	58	33	30	36	22
Urology	147	88	58	64	70	44

TABLE 1 (continued)

USABLE RESPONSES TO 1984 PPCIS FEE QUESTIONS BY PROCEDURE, SPECIALTY, AND PAYOR

		USABLE FEE RESPONSES				
	Self-Employed Physicians	Usual	Blue Shield	Private	Medicare	Medicaid
Follow-up Hospital Visit (cont.) (CPT-4 90260)						
OBGYN	234	111	50	58	45	47
Other Surgery	152	83	40	48	56	44
Other Specialties	114	48	36	36	37	32
All Specialties*	2,396	1,532	850	974	1,056	805
Anesthesia for Hernia Repair (CPT-4 0830)						
Anesthesiologist	238	164	91	122	119	119
Anesthesia for Hysterectomy (CPT-4 0846)						
Anesthesiologist	238	141	85	108	100	102
EKG (CPT-4 93000)						
Cardiologist	120	82	53	54	59	33
General/Family Practice	567	372	208	237	228	158
Excise Lesion (CPT-4 11400)						
General Surgeon	221	150	86	96	95	86
Hernia Repair (CPT-4 49505)						
General Surgeon	221	160	97	108	104	93
Proctosigmoidoscopy (CPT-4 45300)						
Internist	365	187	92	104	108	60

TABLE 1 (continued)

USABLE RESPONSES TO 1984 PPCIS FEE QUESTIONS BY PROCEDURE, SPECIALTY, AND PAYOR

		USABLE FEE RESPONSES				
	Self-Employed Physicians	Usual	Blue Shield	Private	Medicare	Medicaid
EKG (CPT-4 93000)						
Internist	365	270	154	164	199	122
Diagnostic D & C (CPT-4 58120)						
OBGYN	234	202	141	156	99	90
Total Hysterectomy (CPT-4 58150)						
OBGYN	234	195	129	149	102	83
Cataract Extraction (CPT-4 66980)						
Ophthalmologist	135	86	55	52	74	49
Serial Tonometry (CPT-4 92100)						
Ophthalmologist	135	69	27	33	45	37
Arthrocentesis of a Major Joint (CPT-4 20610)						
Orthopedic Surgeon	135	86	50	58	50	38
Total Hip Replacement (CPT-4 27130)						
Orthopedic Surgeon	135	35	27	30	35	35
Frozen Section Consultation (CPT-4 88331)						
Pathologist	128	74	33	38	45	33

TABLE 1 (continued)

USABLE RESPONSES TO 1984 PPCIS FEE QUESTIONS BY PROCEDURE, SPECIALTY, AND PAYOR

		USABLE FEE RESPONSES				
	Self-Employed Physicians	Usual	Blue Shield	Private	Medicare	Medicaid
Hospital Visit (CPT-4 90260)						
Psychiatrist	222	126	69	85	57	42
Therapy Session (CPT-4 90844)						
Psychiatrist	222	175	103	115	77	61
Chest X-Ray (CPT-4 71010)						
Radiologist	191	113	65	78	74	68
Barium Enema (CPT-4 74270)						
Radiologist	191	120	68	82	79	73
Cystourethroscopy (CPT-4 52100)						
Urologist	147	108	73	77	91	62
TURP (CPT-4 52601)						
Urologist	147	110	74	82	94	52

*Excludes pediatricians, readiologists, pathologists, anesthesiologists, and psychiatrists.

Source: 1983-84 Physician Practice Cost and Income Survey.

physicians responded with a usable usual fee. The proportion providing usable fees by payor is considerably lower, less than half in many cases. The usable response rate tends to be lowest for Blue Shield and Medicaid, but this varies by procedure. In no case is the sample size for the mean fees less than 30 (except for a follow-up hospital visit by an ophthalmologist, where N = 22), but it is not uncommon for the means to be based on 30-50 physicians' responses. The sample sizes for the ratios of Medicare to other fees are lower than the numbers shown in Table 1 because the physician had to report both a Medicare fee and one for the other payor. However, in most cases, the resulting reduction was small. The sampling weights assigned by NORC were used in all analyses so that averages are representative of the physician population.

3.2 Data Limitations

Although the PPCIS does contain data on all major groups of payors, including the physicians' own usual charge, the data have certain limitations. First, the fees are not strictly comparable by payor.* Blue Shield's maximum allowed charge, for example, is not the same as the fee paid by the major private insurance company. If Blue Shield's maximum was higher than the physician's usual charge, he may have been paid his actual charge and not be able to answer the question as it was asked because he did not experience the payor's maximum. Assuming the service was covered, he should always have been able to answer the private insurer question, however, because of the way it was asked. He should either have remembered or have been able to find in his records the amount actually paid by the commercial insurer. If his charge exceeded the Blue Shield maximum, on the other hand, then he was

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*In particular, the reported commercial insurer fee may not include the patient copayment because the physician was asked how much the commercial insurer paid her, not for the allowed charge. This may make commercial insurers appear less generous relative to the other payors than they actually were.

more likely to know that payor's maximum because it was the amount he was paid. But if he was, therefore, able to answer that question correctly, the reported Blue Shield and commercial insurer fees will not be strictly comparable.

Second, the physician's responses depend on his knowledge of fees, payments by different payors, and recall. Not all physicians know exactly what each payor pays, and some of those who may have known once may not remember accurately what they were in the previous year. Moreover, their perceptions of the fees may be colored by other characteristics of the patients or their payors. For example, if a payor habitually delays payment or returns claims for corrections, physicians may equate the extra hassle with fees and believe the payor's fees are lower than they are. Similarly, if the patients of one payor tend to be more difficult to treat than those of other payors, the physician's perception may be that the fee is not enough even if in reality it is comparable to those of other payors. On the other hand, even if their beliefs about the fees are not factually precise, if physician behavior is influenced by these considerations, then their perceptions of relative fees may be even more important than the actual fees.

Another limitation of the data derives from the fact that NORC selected a national sample by specialty with the result that it contains too few physicians to analyze at state or within-state levels. To be able to do so would be an advantage since fees tend to be set by payors on a statewide or sub-state basis. On the other hand, data were analyzed by region (Northeast, Midwest, South, and West) and by an urban/rural (MSA/nonMSA) split.

A final limitation is that the data were collected in 1984-85 about the physicians' 1984-85 fee experience. Therefore, they are relatively old and would not reflect changes which might have occurred since 1984-85.

While these limitations are real and care must be taken in interpreting the data, when viewed alongside other data, we believe they increase our knowledge of the relationship of Medicare fees to those paid by others.

4.0 DESCRIPTIVE RESULTS

4.1 Fees for Intermediate Office Visits

Table 2 presents national average fees by payor for an intermediate office visit with an established patient (CPT-4 code, 90060) for each of twelve specialties. In addition, the ratio of the physician's Medicare fee to the fee reported for each of the other payors is reported. Mean fees for each payor were calculated for all physicians who reported a fee for that payor even if they did not report fees for other payors. The ratios comparing each payor to Medicare, however, were calculated only for those physicians who reported fees for both. Standard errors are in parentheses in Table 2.

In every case, the usual fee is the highest reported for the procedure. Commercial insurers are reported to pay the highest fees, followed by Blue Shield plans, Medicare, and Medicaid, in that order. The fee differences are highly statistically significant in almost all cases. The fee hierarchy is consistent with the institutional factors in fee-setting, described earlier in Chapter 1.

The results show considerable consistency in the relationship of Medicare fees to those of other payors, including the physician's usual charge. Thus, for 10 of the 11 specialties, the ratio of the Medicare fee to the physician's usual charge varied between only 70 percent and 75 percent. The eleventh specialty, obstetrics and gynecology, reported Medicare fees equal to 65 percent of their usual charges. Medicare fees varied between 80 percent and 90 percent of commercial insurer fees for all specialties except Ob/Gyn. In two cases (ophthalmology and other surgery), the mean Blue Shield fee was reported to be equal to or a little more than the Medicare fee. This is possible even though the Blue Shield mean was higher than the Medicare mean. The reason for this apparent anomaly is that the ratio was calculated only for those physicians reporting <u>both</u> fees. Although the Medicare carrier cannot pay more than the highest fee paid in its private

TABLE 2

NATIONAL AVERAGE FEES BY PAYOR AND SPECIALTY, FOR INTERMEDIATE OFFICE VISITS (CPT-4 90060), 1984

	MEAN FEE*					MEDICARE FEE AS PERCENT OF:**			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
General Practice	$23.07 (0.71)	$20.18 (0.93)	$17.93 (0.79)	$16.25 (0.54)	$12.79 (0.49)	0.74 (0.02)	0.88 (0.07)	0.97 (0.09)	1.33 (0.05)
Family Practice	23.39 (0.44)	21.71 (0.60)	21.10 (0.75)	17.10 (0.40)	12.58 (0.28)	0.73 (0.01)	0.82 (0.02)	0.86 (0.02)	1.41 (0.04)
Internal Medicine	30.28 (0.58)	26.85 (0.76)	25.41 (0.92)	21.81 (0.44)	13.88 (0.46)	0.75 (0.01)	0.86 (0.03)	0.93 (0.03)	1.76 (0.06)
Cardiology	35.84 (1.37)	32.80 (1.78)	31.07 (1.85)	25.88 (1.13)	13.73 (0.84)	0.72 (0.02)	0.82 (0.03)	0.89 (0.06)	2.03 (0.17)
Other Medical Specs.	32.75 (0.97)	29.88 (0.97)	27.17 (1.20)	23.46 (0.76)	13.77 (0.60)	0.73 (0.01)	0.86 (0.04)	0.92 (0.04)	1.95 (0.16)
General Surgery	26.61 (0.96)	22.43 (1.06)	21.23 (1.00)	18.24 (0.63)	11.89 (0.47)	0.74 (0.02)	0.86 (0.04)	0.90 (0.06)	1.67 (0.09)
Orthopedic Surgery	31.64 (1.39)	29.14 (1.59)	27.26 (1.73)	22.49 (1.39)	14.10 (1.06)	0.70 (0.02)	0.80 (0.03)	0.84 (0.04)	1.81 (0.11)
Opthalmology	34.21 (1.14)	31.61 (1.72)	27.37 (1.65)	26.08 (1.22)	14.58 (0.82)	0.75 (0.02)	0.81 (0.03)	1.05 (0.09)	1.98 (0.12)
Urology	28.27 (1.02)	25.54 (1.10)	23.72 (0.94)	20.46 (0.75)	12.74 (0.66)	0.76 (0.02)	0.88 (0.03)	0.95 (0.04)	1.83 (0.12)
OB/Gynecology	33.77 (0.90)	29.34 (1.09)	28.19 (1.06)	21.52 (0.80)	15.34 (0.63)	0.65 (0.02)	0.76 (0.03)	0.81 (0.04)	1.60 (0.11)
Other Surgery	29.85 (1.17)	26.10 (1.14)	24.19 (1.29)	22.27 (0.99)	12.13 (0.63)	0.74 (0.02)	0.84 (0.03)	1.00 (0.08)	1.93 (0.16)
All Specialties***	29.52 (0.28)	26.71 (0.34)	25.04 (0.37)	21.03 (0.24)	13.47 (0.18)	0.73 (0.00)	0.84 (0.01)	0.91 (0.01)	1.71 (0.03)

*Average across all physicians reporting a fee for a particular payor.
**Average of ratio for physicians reporting a Medicare fee and one for the other payor.
***Excludes pediatricians, radiologists, pathologists, anesthesiologists, and psychiatrists.

Note: Standard errors are in parentheses. NORC sampling weights were used.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

business, in those states in which Blue Shield is not the Medicare carrier, it is possible that Blue Shield actually pays less than Medicare.

The ratio of Medicare to Medicaid fees is consistently greater than one, reflecting Medicaid's institutionalized position at the bottom of the fee hierarchy. The ratio is highest for subspecialists, like cardiologists and other medical specialists, suggesting that many Medicaid programs may not reimburse specialists at higher rates than general and family practitioners. (By contrast, almost all Medicare Part B carriers recognize specialty differences in their reasonable charge determinations.)

4.2 Fees for Intermediate Hospital Visit

The mean fees for intermediate hospital visits (CPT-4 code 90260) show a pattern similar to that observed for office visits (Table 3). The reported usual fee is always highest, followed in descending order by commercial insurance (with only two exceptions, other surgery and ophthalmology), Blue Shield, Medicare, and Medicaid. In addition, the ratio of Medicare to usual fees is in a similar narrow range as that for office visits, 71 percent to 77 percent, except for Obstetrics and Gynecology, at 64 percent. The mean ratio of Medicare fees to commercial insurance fees varied from 81 percent to 96 percent (again, with the exception of Obstetrics and Gynecology). The Blue Shield-Medicare and Medicaid-Medicare ratios are also similar to those for the office visit.

4.3 Fees for Selected Specialty Services

Table 4 contains mean fees and standard errors, by payor, for twenty-one services performed by twelve specialties. Again, almost without exception, the same hierarchy of fees is seen: the usual fee, followed by commercial insurance, Blue Shield, Medicare, and Medicaid. The lone exception was for orthopedists who reported an average Blue Shield fee $.31 higher than the commercial insurance fee for an arthrocentesis of a major joint.

TABLE 3

NATIONAL AVERAGE FEES BY PAYOR AND SPECIALTY, FOR FOLLOW-UP HOSPITAL VISITS (CPT-4 90260), 1984

	MEAN FEE*					MEDICARE FEE AS PERCENT OF:**			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
General Practice	$27.12 (1.00)	$23.88 (1.14)	$21.21 (0.94)	$20.42 (1.08)	$13.74 (0.56)	0.77 (0.02)	0.96 (0.11)	1.02 (0.13)	1.48 (0.10)
Family Practice	26.75 (0.52)	24.63 (0.63)	23.60 (0.66)	19.45 (0.51)	14.08 (0.42)	0.74 (0.01)	0.82 (0.03)	0.87 (0.04)	1.47 (0.05)
Internal Medicine	33.72 (0.68)	29.98 (0.76)	28.09 (0.80)	23.76 (0.56)	14.62 (0.58)	0.72 (0.01)	0.84 (0.02)	0.89 (0.03)	1.82 (0.06)
Cardiology	36.96 (1.29)	33.14 (1.53)	30.09 (1.38)	26.00 (1.05)	15.36 (1.05)	0.71 (0.02)	0.82 (0.03)	0.89 (0.04)	1.99 (0.16)
Other Medical Specs.	36.20 (0.87)	32.63 (0.90)	29.90 (1.01)	25.43 (0.78)	15.01 (0.92)	0.72 (0.01)	0.81 (0.02)	0.86 (0.02)	2.06 (0.14)
General Surgery	28.62 (1.09)	25.02 (1.13)	22.64 (1.10)	20.86 (0.93)	11.92 (0.75)	0.74 (0.02)	0.84 (0.02)	0.90 (0.02)	1.95 (0.15)
Orthopedic Surgery	29.43 (1.30)	25.48 (1.13)	25.41 (1.22)	20.78 (1.09)	14.41 (1.17)	0.75 (0.03)	0.83 (0.03)	0.83 (0.03)	1.61 (0.11)
Opthalmology	34.55 (1.95)	29.33 (2.48)	28.58 (2.32)	24.84 (1.66)	13.76 (1.21)	0.77 (0.03)	0.86 (0.03)	0.89 (0.02)	2.17 (0.23)
Urology	30.29 (1.37)	26.46 (1.24)	25.51 (1.33)	21.22 (1.10)	12.21 (0.89)	0.73 (0.02)	0.84 (0.03)	0.88 (0.03)	1.76 (0.10)
OB/Gynecology	35.91 (1.70)	33.57 (1.99)	32.03 (2.08)	21.58 (1.57)	15.25 (1.39)	0.64 (0.04)	0.67 (0.04)	0.72 (0.05)	1.55 (0.18)
Other Surgery	31.68 (1.28)	27.95 (1.57)	29.11 (1.64)	24.60 (1.15)	13.34 (0.83)	0.75 (0.02)	0.86 (0.05)	0.88 (0.04)	2.17 (0.19)
All Specialties***	31.64 (0.32)	28.33 (0.35)	26.83 (0.36)	22.58 (0.27)	14.15 (0.24)	0.73 (0.01)	0.83 (0.01)	0.88 (0.01)	1.78 (0.03)

*Average across all physicians reporting a fee for a particular payor.
**Average of ratio for physicians reporting a Medicare fee and one for the other payor.
***Excludes pediatricians, radiologists, pathologists, anesthesiologists, and psychiatrists.

Note: Standard errors are in parentheses. NORC sampling weights were used.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

TABLE 4

NATIONAL AVERAGE FEES BY PAYOR AND SPECIALTY, FOR SELECTED SERVICES, 1984

	MEAN FEE*					MEDICARE FEE AS PERCENT OF:**			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
Anesthesiology									
Anesthesia for hernia repair (CPT-4 00830)	$234.85 (5.00)	$217.00 (6.43)	$205.48 (6.84)	$143.33 (4.94)	$85.54 (4.50)	0.59 (0.01)	0.70 (0.03)	0.73 (0.02)	1.98 (0.10)
Anesthesia for Hysterectomy (CPT-4 00846)	418.29 (12.00)	390.97 (14.11)	360.97 (15.76)	252.07 (11.17)	149.14 (8.28)	0.59 (0.01)	0.68 (0.02)	0.75 (0.03)	2.06 (0.14)
Cardiology									
EKG (CPT-4 93000)	38.89 (0.97)	36.59 (1.20)	35.98 (1.17)	30.49 (1.07)	17.64 (1.20)	0.77 (0.02)	0.86 (0.03)	0.88 (0.03)	1.94 (0.14)
General Surgery									
Excise Lesion (CPT-4 11400)	75.21 (3.11)	70.85 (3.46)	60.81 (3.13)	54.87 (2.93)	27.21 (2.01)	0.73 (0.02)	0.79 (0.02)	0.90 (0.03)	2.54 (0.24)
Hernia Repair (CPT-4 49505)	655.00 (16.16)	593.38 (19.84)	513.88 (15.87)	474.72 (15.50)	263.06 (14.86)	0.73 (0.02)	0.83 (0.04)	0.97 (0.09)	2.21 (0.15)
Internal Medicine									
Proctosigmoidoscopy (CPT-4 45300)	53.69 (1.93)	50.07 (2.32)	48.91 (2.35)	41.17 (1.77)	27.17 (2.29)	0.76 (0.02)	0.85 (0.02)	0.88 (0.04)	1.85 (0.23)
EKG (CPT-4 93000)	35.26 (0.55)	32.61 (0.69)	31.45 (0.73)	27.18 (0.53)	18.10 (0.62)	0.78 (0.01)	0.84 (0.01)	0.90 (0.02)	1.64 (0.06)

TABLE 4 (continued)

NATIONAL AVERAGE FEES BY PAYOR AND SPECIALTY, FOR SELECTED SERVICES, 1984

	MEAN FEE*					MEDICARE FEE AS PERCENT OF:**			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
OB/GYN									
Diagnostic D&C (CPT-4 58120)	379.82 (8.91)	345.00 (10.00)	320.94 (9.73)	233.63 (8.41)	142.23 (7.40)	0.63 (0.02)	0.73 (0.04)	0.80 (0.04)	2.11 (0.19)
Hysterectomy (CPT-4 58150)	1,362.33 (33.91)	1,208.26 (38.03)	1,112.56 (34.51)	845.49 (35.76)	531.18 (27.72)	0.65 (0.02)	0.80 (0.09)	0.85 (0.09)	2.00 (0.19)
Ophthalmology									
Cataract Extraction (CPT-4 66980)	1,974.14 (52.31)	1,745.45 (70.74)	1,567.17 (60.29)	1,518.88 (44.70)	818.99 (54.45)	0.77 (0.02)	0.88 (0.03)	1.12 (0.10)	2.39 (0.21)
Serial Tonometry (CPT-4 92100)	39.02 (1.84)	35.25 (2.67)	30.98 (2.74)	31.19 (2.06)	18.99 (1.78)	0.77 (0.02)	0.97 (0.09)	1.11 (0.15)	1.96 (0.16)
Orthopedics									
Arthocentesis for Major Joint (CPT-4 20610)	53.38 (3.56)	45.29 (2.87)	45.60 (2.94)	37.21 (2.90)	18.41 (1.63)	0.70 (0.02)	0.80 (0.02)	0.86 (0.03)	2.26 (0.24)
Pathology									
Frozen Section (CPT-4 88331)	90.81 (3.97)	86.19 (5.51)	70.49 (4.88)	51.72 (3.44)	33.16 (3.09)	0.60 (0.04)	0.61 (0.05)	0.78 (0.06)	2.52 (0.47)

TABLE 4 (continued)

NATIONAL AVERAGE FEES BY PAYOR AND SPECIALTY, FOR SELECTED SERVICES, 1984

	MEAN FEE*					MEDICARE FEE AS PERCENT OF:**			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
Psychiatry									
Follow-up Hospital Visit (CPT-4 90260)	73.77 (2.81)	58.47 (2.96)	54.57 (3.19)	40.20 (2.95)	25.64 (2.34)	0.61 (0.03)	0.78 (0.04)	0.79 (0.04)	2.05 (0.40)
Therapy Session (CPT-4 90844)	82.63 (1.06)	60.42 (1.85)	58.42 (1.94)	42.81 (1.82)	30.70 (1.58)	0.53 (0.02)	0.73 (0.04)	0.71 (0.04)	1.72 (0.14)
Radiology									
Chest X-ray (CPT-4 71010)	27.24 (1.21)	24.95 (1.33)	23.53 (1.43)	20.06 (1.15)	14.34 (0.83)	0.72 (0.02)	0.79 (0.02)	0.90 (0.04)	1.46 (0.06)
Barium Enema (CPT-4 74270)	82.49 (4.15)	68.45 (3.80)	66.51 (4.26)	58.05 (3.40)	37.48 (2.40)	0.71 (0.02)	0.84 (0.03)	0.85 (0.03)	1.65 (0.08)
Urology									
Cystourethroscopy (CPT-4 52100)	178.57 (6.98)	162.97 (6.69)	151.77 (5.52)	116.37 (4.60)	66.47 (5.20)	0.69 (0.02)	0.78 (0.02)	0.83 (0.03)	2.46 (0.30)
TURP (CPT-4 52601)	1,410.11 (39.27)	1,272.43 (44.50)	1,227.84 (42.59)	1,024.70 (27.37)	545.10 (38.99)	0.74 (0.01)	0.99 (0.15)	0.87 (0.03)	2.72 (0.31)

*Average across all physicians reporting a fee for a particular payor.
**Average of ratio for physicians reporting a Medicare fee and one for the other payor.

Note: Standard errors are in parentheses. NORC sampling weights were used.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

However, as might be expected from such a diversity of services and procedures, the ratios of Medicare fees to physician usual fees and to those of other payors very more than for office and hospital visits. The Medicare/usual fee ratio ranged from .53 to .78. The Medicare/commercial insurance ratio was from .61 to .99; and that for Blue Shield fees was from .71 to 1.12. The Medicare/Medicaid ratio varied from a low of 1.46 to a high of 2.72, again reflecting not only low Medicaid fees generally but also considerable state-to-state variation relative to Medicare fees across the country.

4.4 Comparison of Medicare Fees to Other Fees, 1976 and 1984

A survey of physician practices similar to the 1984 PPCIS was conducted by NORC for HCFA in 1976, and by comparing the earlier results with those reported here, we can identify the extent to which the relative fees of each of the several payors changed. Although the comparisons are not perfect, they do provide some indication that Medicare fees have increased less than private fees, but have increased more than Medicaid fees.

The 1976 study asked physicians to identify their usual fees and those paid by each of the payors for each of seven services using verbal descriptions instead of CPT-4 codes to define the services. The 1984 survey included questions on equivalent, if not identical, services for five of those in the 1976 study. They are: follow-up visit in the hospital on the day after a patient is admitted (comparable to an intermediate hospital visit); routine follow-up visit in the office (comparable to an intermediate office visit); diagnostic D and C; inguinal hernia repair; and electrocardiogram. We obtained national average fees by payor in 1976 from Sloan, Cromwell, and Mitchell (1978). The ratios of national average Medicare fees to those of the other payors (or the usual physician charge) are shown in Table 5 for 1976 and 1984. All specialties that performed a service are included in the 1976 and

TABLE 5

RATIO OF NATIONAL AVERAGE MEDICARE FEES TO THOSE OF OTHER PAYORS, 1976 AND 1984

	Usual Fee		Blue Shield		Medicaid	
	1976	1984	1976	1984	1976	1984
Follow-up visit in the hospital on the day after admission	.72	.68	.93	.81	1.31	1.59
Routine follow-up office visit	.76	.71	.95	.84	1.22	1.56
Inguinal hernia repair	.77	.73	.95	.92	1.37	1.79
Diagnostic D and C	.70	.62	.92	.76	1.36	1.59
Electrocardiogram	.80	.77	.92	.86	1.17	1.46

Sources: Sloan, Cromwell, Mitchell, 1978, page 89; Physician Practice Cost and Income Survey, 1984.

the 1984 means*. The fee ratios for 1984 in Table 5 are not comparable to the fee ratios presented elsewhere in this report because the ones in Table 5 are ratios of national mean fees rather than means of the fee ratios at the individual physician level.

The two studies also asked for the payors' fees somewhat differently, as the table indicates**:

	1976	1984
Physician's charge	Usual fee	Usual fee
Blue Shield	"Best schedule"	Maximum allowed charge
Medicare	Usual payment	Reasonable charge or allowance, including patient co-pay.
Medicaid's Payments:	Fee schedule	How much Medicaid pays for...

The results show that, in general, Medicare fees did not increase as much as either physicians' usual fees or Blue Shield payments, but rose more than Medicaid fees. Thus, for example, in 1976 physicians reported that Medicare paid 76 percent of their usual fee for a routine follow-up office visit; but by 1984, the program paid only 71 percent, a decline of 5 percent. Similarly, while Medicare was reported to have paid 95 percent of the Blue Shield payment in 1976 for that service, by 1984 it paid only 84 percent, a reduction of 11 percent. On the other hand, Medicare was reported to have paid 122 percent of the Medicaid fee for that office visit in 1976, but 156 percent of Medicaid's payment eight years later. This pattern was consistent across all five services.

In most cases, the change from 1976 to 1984 in the relative fees was small (i.e., 3 percent to 5 percent), but it was somewhat larger for diagnostic D and C, a procedure performed by gynecologists, who were already

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*The 1976 and 1984 means are not strictly comparable because of the different sampling frames of the two surveys. All specialties were surveyed in 1984 versus only a subset in 1976. Also, the 1976 survey included only office-based, self-employed physicians in groups of ten or less.

**The 1976 survey did not ask questions about commercial insurers.

noted to have relative Medicare fees that were lower than those of other specialties. Finally, Medicaid fees declined relative to Medicare fees by amounts ranging from 23 percent (diagnostic D and C) to 42 percent (inguinal hernia repair). Since the decline in relative Medicare fees was small, it is reasonable to conclude that Medicare patients probably did not have a significantly more difficult time gaining access to these services in 1984 than they had in 1976. On the other hand, however, Medicaid patients were at a substantially greater disadvantage vis-a-vis other patients in the latter year.

4.5 Urban-Rural and Regional Differences in Relative Fees

Comparisons of the national average fees of different payors may mask important geographic variations in relative fees. The PPCIS sample is not sufficiently large for metropolitan area or state-level comparisons, but urban-rural and regional comparisons are feasible. Tables 6 and 7 show fees for an intermediate office visit with an established patient (CPT-4 90060) and a follow-up hospital visit (CPT-4 90260) for all specialties in urban, rural, and regional areas by payor. The mean fees are based on all physicians reporting a fee for a particular payor. In addition, the average ratio of the physician-reported Medicare fee to the fee of each of the other payors is displayed. Because a physician had to report both a Medicare fee and a fee for the other payor to be included in the average ratio, the sample is smaller for the ratios than for the fee levels. The sample size exceeds 100 for all fees or ratios reported in Tables 6 and 7 because all specialties are pooled. Typically the sample is 200-300 physicians. Standard errors of the fee levels or ratios are shown in parentheses in the tables.

Access to medical care in rural areas is a particular concern of policymakers. Access will be affected by the competitiveness of Medicare fees with usual fees and those of other payors. The physician's usual charge and the fees of all payors are considerably lower in rural than in urban areas (Table 6). The Medicare fee for an intermediate office visit, for example,

TABLE 6

MEAN PHYSICIAN OFFICE AND HOSPITAL VISIT FEE BY PAYOR AND URBAN-RURAL LOCATION, ALL SPECIALTIES*, 1984

	MEAN FEE**					MEDICARE FEE AS PERCENT OF:***			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
Intermediate Office Visit (CPT-4 90060)									
Urban	$30.93 (0.31)	$28.01 (0.38)	$26.10 (0.42)	$22.06 (0.27)	$13.69 (0.22)	0.73 (0.01)	0.84 (0.01)	0.92 (0.02)	1.80 (0.04)
Rural	22.42 (0.42)	20.21 (0.58)	19.94 (0.65)	16.30 (0.37)	12.60 (0.29)	0.74 (0.01)	0.86 (0.02)	0.89 (0.03)	1.39 (0.04)
Follow-up Hospital Visit (CPT-4 90260)									
Urban	33.29 (0.36)	29.93 (0.39)	28.19 (0.41)	23.64 (0.31)	14.35 (0.29)	0.73 (0.01)	0.83 (0.01)	0.88 (0.01)	1.89 (0.04)
Rural	24.04 (0.48)	21.34 (0.49)	21.29 (0.57)	17.86 (0.43)	13.51 (0.37)	0.75 (0.01)	0.86 (0.03)	0.89 (0.04)	1.40 (0.04)

*Excluding pediatricians, psychiatrists, radiologists, anesthesiologists, and pathologists.
**Average across all physicians reporting a fee for a particular payor.
***Average of ratio for physicians reporting a Medicare fee and one for the other payor.

Note: Standard errors are in parentheses. NORC sampling weights were used.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

TABLE 7

MEAN PHYSICIAN OFFICE AND HOSPITAL VISIT FEE BY PAYOR AND REGIONAL LOCATION, ALL SPECIALTIES*, 1984

	MEAN FEE**					MEDICARE FEE AS PERCENT OF:***			
	Usual	Commercial	Blue Shield	Medicare	Medicaid	Usual	Commercial	Blue Shield	Medicaid
Intermediate Office Visit (CPT-4 90060)									
Northeast	$31.09 (0.58)	$28.15 (0.68)	$24.39 (0.79)	$23.07 (0.49)	$12.06 (0.32)	0.75 (0.01)	0.88 (0.04)	1.01 (0.03)	2.07 (0.06)
South	27.98 (0.47)	24.29 (0.57)	22.77 (0.63)	19.21 (0.39)	13.20 (0.32)	0.71 (0.01)	0.85 (0.02)	0.92 (0.03)	1.59 (0.06)
Midwest	24.57 (0.57)	22.85 (0.75)	21.91 (0.74)	17.59 (0.45)	12.71 (0.35)	0.74 (0.01)	0.82 (0.02)	0.88 (0.02)	1.45 (0.04)
West	34.73 (0.53)	31.45 (0.65)	30.39 (0.65)	24.46 (0.46)	16.28 (0.44)	0.72 (0.01)	0.80 (0.01)	0.84 (0.01)	1.70 (0.06)
Follow-up Hospital Visit (CPT-4 90260)									
Northeast	34.65 (0.76)	31.17 (0.82)	27.65 (0.87)	23.88 (0.55)	11.35 (0.47)	0.73 (0.01)	0.84 (0.01)	0.93 (0.03)	2.43 (0.09)
South	29.39 (0.49)	26.33 (0.58)	24.87 (0.58)	20.82 (0.44)	14.02 (0.40)	0.72 (0.01)	0.85 (0.03)	0.89 (0.03)	1.56 (0.05)
Midwest	25.81 (0.43)	23.98 (0.47)	23.26 (0.51)	18.99 (0.45)	13.96 (0.40)	0.76 (0.01)	0.80 (0.01)	0.84 (0.02)	1.46 (0.05)
West	37.48 (0.68)	32.80 (0.73)	32.61 (0.71)	27.10 (0.60)	17.66 (0.55)	0.73 (0.01)	0.84 (0.02)	0.85 (0.01)	1.68 (0.06)

*Excluding pediatricians, psychiatrists, radiologists, anesthesiologists, and pathologists.
**Average across all physicians reporting a fee for a particular payor.
***Average of ratio for physicians reporting a Medicare fee and one for the other payor.

Note: Standard errors are in parentheses. NORC sampling weights were used.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

is 26 percent lower in rural areas than urban areas. The Blue Shield, commercial, and usual urban-rural fee differences are similar. Some of these urban-rural differences may be due to a more expensive specialty mix in urban areas. However, the urban-rural fee differences for major specialties (general practitioner, family practitioner, internist, general surgeon--not shown in the table) did not differ substantially from the all-specialty difference.

The urban-rural Medicaid fee difference is noticeably smaller than that of the other payors. Medicaid paid only 8 percent less for an office visit, on average, in rural areas than in urban areas. Presumably the major reason for the smaller Medicaid differential is the use of state-wide fixed fee schedules by most Medicaid programs. By contrast, Medicare determines fee levels on the basis of reasonable charge localities, which often conform to urban-rural boundaries.

Although all fees are lower in rural areas, Medicare fees bear the same relationship to the physician's usual fee and those of other payors, except Medicaid, in rural areas as in urban areas. For an office or hospital visit, on average, Medicare consistently pays about 75 percent of the physician's usual charge, 85 percent of the commercial insurance fee, and 90 percent of the Blue Shield fee. Because of less urban-rural differentiation in Medicaid fees, Medicare fees (as well as those of other payors and the usual charge) are higher relative to Medicaid fees in urban areas.

The implications of lower rural fees for access to care are beyond the scope of this work. Evaluation of these differences requires comparisons to costs of practice in urban and rural areas (see Pope et al., 1989, and Mitchell and Davidson, 1989) and examination of measures of access. However, it can be said that access of Medicare beneficiaries to care in rural areas is not impeded by less favorable Medicare payment relative to other payors or usual charges than in urban areas. That is, Medicare fees bear the same relationship to usual charges and Blue Shield and commercial fees in rural areas as in urban areas. Medicaid fees, on the other hand, are relatively

higher in rural areas, possibly implying easier access to physician services for rural Medicaid recipients than their urban counterparts.

Excepting Medicaid, average physician fees for an office or hospital visit are consistently highest in the West, next highest in the Northeast, lower in the South, and lowest in the Midwest (Table 7). Regional fee differences are substantial. For example, the average usual charge for an office visit varies from $34.73 in the West to only $24.57 in the Midwest, a difference of 29 percent. Medicaid fees are also highest in the West, but higher in the South and Midwest than in the Northeast. Northeastern states tend to have generous eligibility standards for Medicaid, but are penurious in their physician reimbursement (Cromwell et al., 1987).

There are only small regional differences in the average Medicare discount from usual fees: it is consistently about 25 percent. However, there is some regional variation in the relationship of Medicare fees to those of other payors. For the office visit, Medicare pays highest relative to private insurers and Blue Shield in the Northeast, and lowest in the West. For physicians who reported both a Medicare and private insurer fee, the Medicare office visit fee averages 88 percent of the private insurer fee in the Northeast, but only 80 percent in the West. This difference is statistically significant. The relative fee is 85 percent in the South compared to 82 percent in the Midwest, not a statistically significant difference. Similarly, for physicians who report both a Medicare and a Blue Shield fee, Medicare actually pays slightly more on average than Blue Shield for an office visit in the Northeast, but 16 percent less in the West.

Medicare also pays relatively better compared to Blue Shield in the Northeast than in the West for a hospital visit. However, Medicare pays about the same compared to private insurers for a hospital visit in the Northeast and West. The tendency of Medicare to pay less relative to Blue Shield and private insurers in the West than in the Northeast may be due to greater population and economic growth in the West, which has raised private fees more rapidly than Medicare fees constrained by the Medicare Economic Index.

Medicare fees relative to Medicaid fees are much higher in the Northeast than in other regions of the country. This is a result both of the relatively high Medicare fees in the Northeast and the low Medicaid fees. The West has the next highest Medicare fees relative to Medicaid, then the South, with the Midwest having the lowest relative fees.

If the fees of these two services are representative, the results imply that Medicare beneficiaries are in the best financial position to obtain access to physician services in the Northeast and in the worst position in the West. Medicaid enrollees appear to be in the worst position by far in the Northeast. Analysis with a larger sample and more procedures, disaggregated by specialty, would be necessary to confirm and refine these results.

4.6 Variation In Medicare Payment Differentials

Measuring the generosity of Medicare fees compared to usual and other insurer fees is the main focus of this part of the study. However, the variation in Medicare discount rates is also of some importance. Not all physicians incur the same discounts, nor is Medicare equally competitive with all insurers for all physicians around the country. To capture some of the inter-insurer variation in allowable fees, we generated frequency distributions of the four Medicare discount rates analyzed above. The results for seven selected procedures are shown in Table 8.* The threshold discount

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*Of the 26 fees reported on the HCFA-NORC survey, seven are displayed in Table 8. Of the 19 services not reported, four were visits to non-Medicare obstetricians or pediatricians, four were general office or hospital visits to psychiatrists or other specialists that are often uncovered by private insurers. EKGs, which do appear in Table 8, were reported by cardiologists, GPs/FPs, and internists. Medicare uncovered vaginal deliveries were reported by GPs/FPs and OB-GYNs. The rest of the excluded services were generally paired with a reported service and thought to be redundant in terms of relative payment differentials. Hernia repairs by surgeons were selected over benign lesions, ECGs over proctosigmoidoscopies for internists, hip replacements instead of arthrocentesis for orthopedic surgeons, TURPs over cystourethroscopies for urologists, chest x-rays over barium enemas for radiologists, anesthesia for hernia repairs instead of for hysterectomies for anesthesiologists. We also did not report on operative consultation for a pathologist due to low response rates.

TABLE 8

DISTRIBUTION OF MEDICARE-PRIVATE PHYSICIAN PAYMENT DIFFERENTIALS

			FEE RATIOS			
	Medicare Fees	Usual Fees	Medicare Usual	Medicare BS	Medicare Private	Medicare Medicaid
Procedure						
ECG with Report (CPT-4 93000)			(486)	(373)	(400)	(297)
Top 10%	$36	$48	1.0	1.0	1.0	2.5
Median	26	35	.80	.88	.84	1.33
Bottom 10%	16	25	.56	.65	.60	1.0
Hernia Repair (CPT-4 49505)			(104)	(85)	(89)	(84)
Top 10	665	913	.94	1.05	1.00	4.1
Median	470	625	.76	.86	.80	1.8
Bottom 10%	300	450	.53	.66	.60	1.0
Anesthesia, Hernia Repair (CPT-4 0830)			(119)	(83)	(108)	(109
Top 10%	200	330	.80	1.13	.94	3.5
Median	130	240	.60	.71	.67	1.6
Bottom 10%	86	150	.42	.47	.46	1.04
Hip Replacement (CPT-4 27130)			(35)	(27)	(30)	(35)
Top 10	3,000	4,160	.88	1.0	.99	6.1
Median	2,000	2,900	.68	.83	.75	2.0
Bottom 10%	860	1,848	.45	.60	.75	2.0
Prostatectomy (CPT-4 52601)			(94)	(70)	(77)	(50)
Top 10%	1,440	1,950	.89	1.09	1.0	5.9
Median	980	1,315	.75	.84	.80	2.1
Bottom 10%	720	1,000	.558	.64	.60	1.16
Cataract Surgery (CPT-4 66980)			(74)	(52)	(50)	(48)
Top 10	1,995	2,575	.99	1.39	1.02	5.0
Median	1,500	2,000	.77	1.0	.87	1.79
Bottom 10%	1,100	1,500	.60	.74	.67	1.00
Chest X-Ray (CPT-4 71010)			(76)	(56)	(63)	(56)
Top 10%	34	46	.93	1.14	1.00	2.07
Median	17	28	.75	.86	.80	1.31
Bottom 10%	10	14	.50	.56	.53	1.00

Note: Sample sizes are in parentheses. The individual physician is the unit of observation.

Source: 1983-84 HCFA-NORC Physician Practice Costs and Income Survey.

rates for the top 10 percent, median, and bottom 10 percent of physicians are shown for each of the four benchmarks, i.e., usual fees, Blue Shield, private, and Medicaid allowable fees. The number of reporting physicians are shown in parentheses under the column heading. Actual Medicare and reported usual fees are shown next to the Medicare discount thresholds for usual fees.

As detailed in the data section, these data have been cleaned and edited. Unusually high and low values have been eliminated. We also present only the top and bottom 10 percent thresholds which are less sensitive to outliers that might possibly be erroneously reported. We have also not reported variations in discount rates for office and hospital visits because of extensive "non-coverage" by Blue Shield and private insurers.

The first procedure shown is an EKG (93000). At least 10 percent of physicians received their full usual fee from Medicare while another 10 percent received only 56 cents on the dollar. The median discount rate was 20 percent (= 1 - .80). Among the 486 physicians reporting both their usual and their Medicare EKG fee, 10 percent received $36 or more from Medicare while another 10 percent received less than $16, more than a two-fold difference. Usual fees also showed wide variation, ranging from $25 to $48 at the bottom and top 10 percent thresholds.

Medicare fees were more competitive with Blue Shield and private EKG fees, as expected. Relative to Medicaid, the top 10 percent of physicians received at least two-and-a-half times as much from Medicare. Conversely, the bottom 10 percent of physicians received Medicaid fees equal to Medicare fees.

Median Medicare discount rates on usual fees (see col. 1) are similar across most of the seven procedures except for anesthesia for a hernia repair where the physician received only 60 percent of billed charges.

What is more striking than the discount rates is the substantial variation in both usual and Medicare fees for the same procedure. For example, the top 10 percent of orthopedic surgeons billed at least $4,160 for a hip replacement compared to only $1,848 or less for the least expensive surgeons. It is even more surprising that reported Medicare allowables for

this procedure ranged from a low of $860 at the bottom 10 percentile to $3,000 at the top 10 percent threshold.

One can argue, of course, that Medicare discounts on usual fees are largely illusory in the sense that usual fees are no longer "usual" in the sense of reflecting average transaction prices. This is clearly evident from the Medicare discount rates relative to other payers. Compared to Blue Shield and private insurers, Medicare is more than fair to the top 10 percent of physicians. The bottom 10 percent threshold discount rate is also 5-15 points higher when comparing Medicare to Blue Shield and private fees.

The variation relative to Medicaid is most striking. The top 10 percent of physicians report receiving 2-6 times more per procedure while at least 50 percent of physicians receive 1.6-2.1 times more from Medicare than Medicaid. This is further evidence of the two public programs working at cross purposes by competing with one another from physician services. Higher Medicare fees either force states to raise their fees to assure access of the poor to physicians or to implicitly restrict access by being uncompetitive.

4.7 Correlations Among the Fees of Different Payors

Physician fees vary for many reasons. One physician may be paid more than another because she is a member of a higher-paid specialty, because she is located in a higher-priced region, or because she charges more. When a physician receives a higher fee from one payor, does she also tend to be paid more by other payors? Table 9 presents correlations among the intermediate office visit and follow-up hospital visit fees of Blue Shield, commercial insurers, Medicare, Medicaid, and the physician's usual charge. All specialties (excluding pediatricians, psychiatrists, radiologists, anesthesiologists, and pathologists) are included in the correlations.

All the correlations are high, .75 or higher, with the exception of correlations with Medicaid fees. This shows that a physician who is paid well relative to other physicians by Blue Shield, commercial insurers, or Medicare is also likely to be relatively well-paid by the other payors. These payors

TABLE 9

CORRELATIONS AMONG THE OFFICE AND HOSPITAL VISIT FEES OF DIFFERENT PAYORS, ALL SPECIALTIES*, 1984

	Usual	Blue Shield	Commercial	Medicare	Medicaid
I. Intermediate Office Visit (CPT-4 90060)					
Usual	---	.83	.89	.77	.43
Blue Shield	.83	---	.90	.75	.52
Commercial	.89	.90	---	.80	.46
Medicare	.77	.75	.80	---	.53
Medicaid	.43	.52	.46	.53	---
II. Follow-up Hospital Visit (CPT-4 90260)					
Usual	---	.88	.92	.76	.47
Blue Shield	.88	---	.93	.79	.55
Commercial	.92	.93	---	.75	.47
Medicare	.76	.79	.75	---	.57
Medicaid	.47	.55	.47	.57	---

*Excluding pediatricians, psychiatrists, radiologists, anesthesiologists, and pathologists.

Note: The individual physician is the unit of observation. NORC sampling weights were used.

Source: 1983-4 HCFA-NORC Physician Practice Costs and Income Survey.

also pay more to physicians who charge more. Physicians' usual charges and the fees of Blue Shield and commercial insurers are especially highly correlated. Medicare's correlation with usual charges, Blue Shield, and commercial fees is lower, but still quite high. A physician's Medicaid fee is related to what she charges and is paid by other payors, but less closely than the interrelationships among fees of the other payors.

In short, the physician fees of different payors vary together closely. Whatever causes one physician to charge more or to be paid more by one payor tends to lead to higher payments from other payors as well. Because most physicians face a fairly similar relationship among Medicare fees, usual charges, and fees of other payors, their financial incentives to treat Medicare patients versus those of other payors are fairly similar. Medicaid fees are related to charges and fees of other payors, but there is more variation in this relationship, leading to more variation in the financial incentive to treat Medicaid patients. This reflects the fact that the majority of state Medicaid programs reimburse physicians using fixed fee schedules rather than Medicare's CPR methodology (Cohen, 1989).

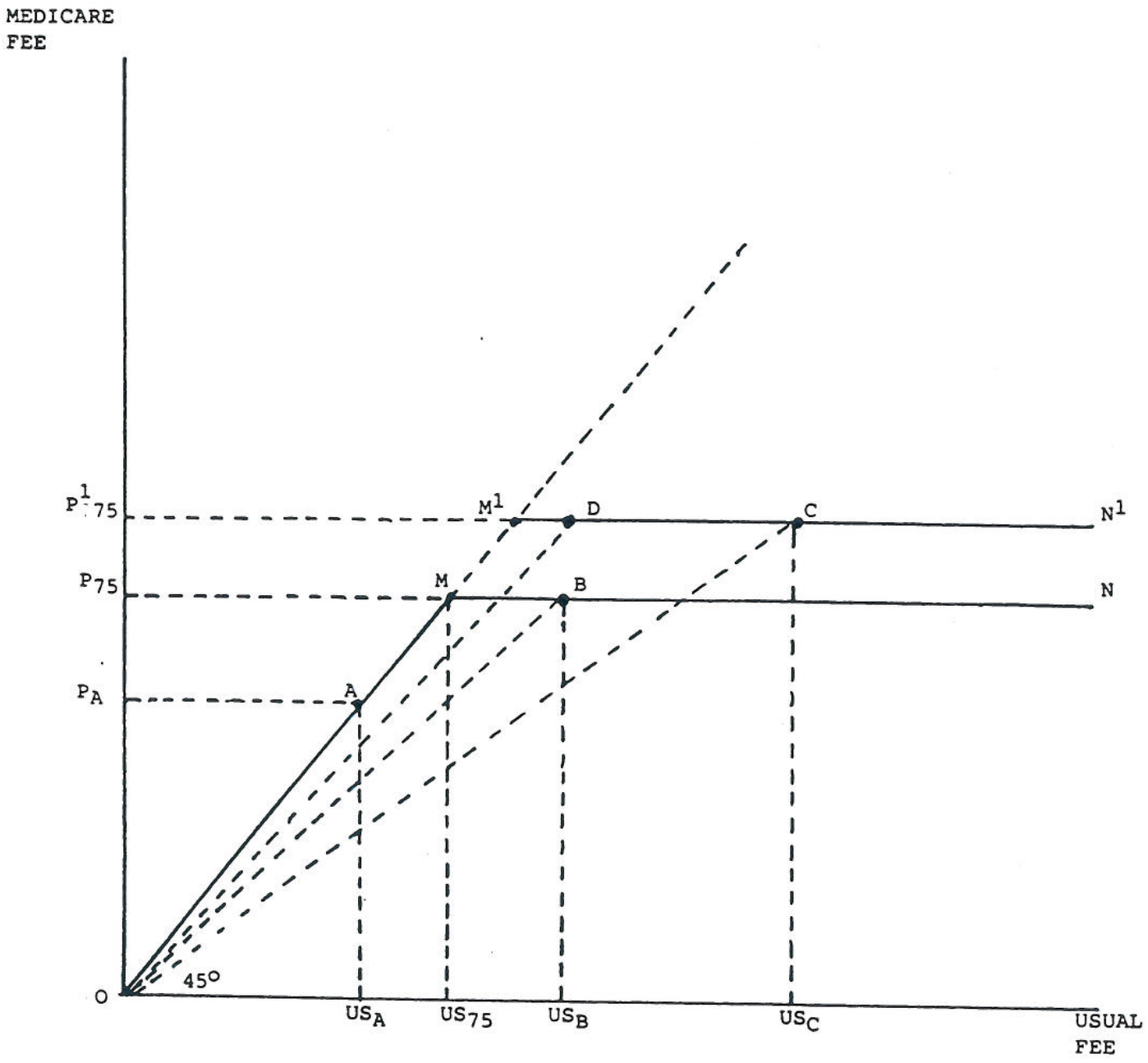
5.0 EXPLAINING MEDICARE FEE DIFFERENTIALS

The descriptive results have shown a systematic fee hierarchy across insurers. The price discriminating monopolist provided the theoretical background for this analysis. Let us restate the theory in a slightly different way that supports a specific empirical specification for the multivariate analysis of differences in fees paid to individual physicians.

First, let us consider the Medicare-usual fee discount rate. At any single point in time for any given locality, the relationship will be as described in Figure 2. For physicians with usual fees below US_{75}, Medicare

FIGURE 2

THE EFFECT OF A PREVAILING FEE CONSTRAINT ON MEDICARE DISCOUNTS



allows the full fee, and line OM is 45 degrees.* We ignore the complication that this year's Medicare customary charge is the median of last year's actual charges. For physicians constrained by the prevailing fee $P_{75} = US_{75}$, the discount can be represented as a ray from the origin to any point along line MN. As usual fees rise beyond the prevailing, the discount rate rises (or the slope of the ray falls). The kink at point M introduces a nonlinearity that complicates regression work. One solution is to write the Medicare allowable fee as a nonlinear function of the usual fee, i.e.,:

$$P_{it} = A*(US_{it})^{b}$$

where $b < 1$, and the subscripts refer to the i-th physician in period t. This equation can be estimated in double-log form as:

$$\ln(P_{it}) = \ln(A) + b*\ln(US_{it})$$

with the coefficient b interpreted as the elasticity of Medicare price with respect to usual fees. That is, if a physician's usual fee rises one percent, the expected Medicare allowable fee rises b percent, taking into consideration the likelihood of the usual fee being constrained by the local prevailing fee. The elasticity can also be estimated by dividing through the first equation by US_{it} and then taking logs, i.e.,:

$$\ln(P_{it}/US_{it}) = \ln(A) + a*\ln(US_{it})$$

where $a = (b-1)$. The left-hand-side of the last equation is the discount rate (in geometrical terms) for the i-th physician.

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*We ignore the complication that this year's Medicare customary charge is the median of last year's actual charges.

The important point so far is that the average discount rate is not a constant but depends upon the physician's usual fee. For $b < 1$, $a = (b-1) < 0$, and the discount rate increases with higher usual fees. This reflects the increasing likelihood that the usual fee will be constrained by the local prevailing fee. It can be shown that the elasticity, b, equals the ratio of the marginal and average proportions of the usual fee paid by Medicare. Thus, the marginal proportion will equal b*AP, where AP = average Medicare proportion evaluated at some Medicare-usual fee combination. For $b < 1$, the marginal proportion is less than the average, reflecting a falling proportion, or a rising discount rate.

This static theory can incorporate temporal changes by recognizing upward shifts in the horizontal Medicare prevailing fee (to M^1N^1 in Figure 2) via the Medicare Economic Index as well as shifts to the right in physician usual fees due to demand and supply effects. As the MEI has fallen short of usual fee increases since its inception, the average discount rate has increased over time. Compare, for example, the slopes at point B and C, which represent a typical physician at two points in time. Another physician may have gone from being unconstrained by the prevailing, say, point A, to point D where the MEI update has become binding on her allowable Medicare fee increases.

The update in the MEI has been carried out on a national level while the rightward shift in usual fees presumably is determined by local market conditions. Thus, it is possible to have inter-area differences in Medicare discount rates from variation in local market growth and competition. Let us assume that the physician's Medicare allowable fee in any period continues to be a nonlinear function of her usual fee with a further wedge between the two introduced by differences in the growth in local markets. One way of specifying the relationship would be:

$$P_{it} = A(US_{it})^{b} * e^{m\ \text{percent}\Delta X}$$

where percentΔX = a vector of percentage changes in exogenous demand and supply variables of the area. Dividing through by the usual fee again and taking logs of both sides gives:

$$\ln(P_{it}/US_{it}) = \ln(A) + (b-1)*\ln(US_{it}) + m* \text{percent } \Delta X$$

which can be estimated using ordinary least squares regression. We hypothesize that the m coefficients will be negative for demand-side variables and positive for supply-side variables. For example, in localities where per capita income has been growing rapidly, the Medicare discount should be more; ceteris paribus. Also included in the X vector are physician characteristics that may affect demand and supply, such as the physician's age, FMG status, and Medicare participation. Physicians per capita is considered a demand-side variable at the level of the individual practitioner and, hence, should have a negative coefficient.

5.1 Regression Results

Ordinary least squares regressions were run on two procedures: the intermediate office and follow-up hospital visit. Four dependent variables were examined: (1) the Medicare discount rate on usual fees; (2) the Medicare-Blue Shield payment difference; (3) the Medicare-private commercial insurer payment difference; and (4) the Medicare-Medicaid payment differential. These dependent variables are specified in log ratio form, i.e., as the log of the proportion of the usual, Blue Shield, private or Medicaid fee paid by Medicare. Mean values and definitions of the independent variables are given in Table 10.

Table 11 presents results, first, for the intermediate office visit. The R^2s at the bottom of the table range from .153 for the Medicare-Medicaid differential to .009 for the Medicare-private payer differential. The associated F-statistics are significant except for the private insurer model. (Degrees of freedom are in parentheses next to the F-statistic.) Although the

TABLE 10

MEANS AND DEFINITIONS OF DEPENDENT AND INDEPENDENT VARIABLES FOR REGRESSION ANALYSIS

	Definitions	Intermediate Office Visit Visit (CPT-4 90060)	Intermediate Follow-up Hospital Visit (CPT-4 90260)
LNUSUAL	Usual fee (logged)	3.320	3.422
LNMCARE	Medicare allowable fee (logged)	2.974	3.071
LNMCUS	Ratio of Medicare to usual fee (logged)	-0.345	0.185
LNMCBS	Ratio of Medicare to Blue Shield fee (logged)	-0.149	-0.176
LNMCPR	Ratio of Medicare to Private fee (logged)	-0.220	-0.228
LNMCMCO	Ratio of Medicare to Medicaid fee (logged)	0.447	-0.480
FP	Family Practice	0.157	0.185
IM	Internal Medicine	0.197	0.220
CD	Cardiology	0.045	0.053
PD	Pediatrics	0.003	0.004
OI	Other Medical	0.107	0.114
GS	General Surgery	0.084	0.065
OR	Orthopedic Surgery	0.065	0.051
OP	Ophthalmology	0.059	0.033
UR	Urology	0.036	0.031
OB	Obstetrics/Gynecology	0.083	0.045
OS	Other Surgery	0.067	0.059
OT	Other Specialties	0.022	0.026
PCMDPOP	Percent change in patient care MDs per capita (1975-83)	0.350	0.353
PCIPDPOP	Percent change inpatient days per capita (1975-83)	-0.074	-0.069
PCOPVPOP	Percent change in outpatient visits per capita (1975-83)	0.105	0.114
PCPCY	Percent change in per capita income (1975-83)	1.207	1.207
URBAN	1 = practicing in MSA; 0 otherwise	0.826	0.821
NC	1 = practicing in Northcentral region	0.204	0.208
SOUTH	1 = practicing in Southern Region	0.313	0.318
WEST	1 = practicing in Western Region	0.222	0.222
AGE1	Age of physician	49.029	48.565
FMG1	1 = Foreign Medical Graduate	0.211	0.214
PARTIC	1 = Signed Medicare participating agreement	0.363	0.345

Note: The individual physician is the unit of observation.

Source: 1983-4 HCFA-NORC Physician Practice Costs and Income Survey.

TABLE 11

REGRESSION RESULTS EXPLAINING VARIATIONS IN MEDICARE DISCOUNT RATES:INTERMEDIATE OFFICE VISIT

INDEPENDENT VARIABLE	DEPENDENT VARIABLE: log(MCARE/USUAL) coeff.	(t)	log(MCARE/BS) coeff.	(t)	log(MCARE/PRIV) coeff.	(t)	log(MCARE/MCAID) coeff.	(t)
LN (USUAL)	-.248	(10.2)	----	----	----	----	----	----
PCMDPOP	-.006	(0.2)	-.025	(0.4)	.016	(0.4)	-.045	(1.0)
PCIPDPOP	.012	(0.4)	.062	(1.0)	-.031	(0.7)	.014	(0.3)
PCOPVPOP	-.007	(0.5)	.017	(0.6)	.006	(0.7)	-.013	(0.6)
PCPCY	-.030	(0.8)	.100	(1.4)	.093	(1.7)	-.035	(0.5)
URBAN	.029	(1.4)	.010	(0.3)	-.041	(1.4)	.131	(4.1)
NC	-.060	(2.6)	-.055	(1.3)	-.040	(1.2)	-.267	(7.1)
SOUTH	-.057	(2.8)	-.047	(1.3)	-.025	(0.9)	-.231	(6.9)
WEST	.020	(0.9)	-.072	(1.9)	-.040	(1.4)	-.174	(4.8)
AGE1	-.000	(0.6)	.002	(1.9)	.000	(0.3)	-.001	(0.6)
FMG1	-.010	(0.5)	.000	(0.0)	-.015	(0.6)	.034	(1.1)
PART	.037	(2.4)	.007	(0.3)	.028	(1.3)	.051	(2.0)
FP	-.005	(0.1)	-.036	(0.6)	-.002	(0.0)	.052	(1.0)
IM	.071	(2.2)	.024	(0.4)	.051	(1.1)	.169	(3.1)
CD	.069	(1.6)	-.035	(0.5)	-.004	(0.1)	.250	(3.3)
PD	.048	(0.4)	-.161	(0.5)	-.054	(0.2)	-.121	(0.4)
OI	-.051	(1.4)	.006	(0.1)	.024	(0.5)	.213	(3.5)
GS	.019	(0.5)	-.037	(0.5)	.039	(0.7)	.149	(2.4)
OR	.011	(0.3)	-.104	(1.5)	.046	(0.9)	.225	(3.4)
OP	.106	(2.6)	.104	(1.4)	-.013	(0.2)	.297	(4.2)
UR	.058	(1.3)	.046	(0.6)	.051	(0.8)	.228	(3.0)
OB	-.078	(2.1)	-.148	(2.2)	-.108	(2.0)	.077	(1.2)
OS	.043	(1.1)	.054	(0.7)	.016	(0.3)	.212	(3.2)
OT	.092	(1.7)	-.017	(0.2)	.036	(0.5)	.252	(2.9)
INTERCEPT	.496	(5.0)	-.318	(2.6)	-.309	(3.1)	.422	(3.6)
R^2 (ADJ)	.098		.022		.009		.153	
F(DOF)	6.9	(271)	1.7	(657)	1.3	(873)	8.4	(923)

(t) = t-statistic.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

explanatory power of the model is low, it is not lower than expected given the large random or unmeasured component inherent in the discount rates. Regressions explaining variations in the level of Medicare allowable fees had R^2s of .55, but once allowable fees are adjusted by physician-specific usual fees the remaining variation is very idiosyncratic to individual and insurer pricing policies.

Column 1 gives the regression coefficients and associated t-statistics for the Medicare discount rate on usual fees. The coefficient on the log of usual fees is -.248 with a t statistic above 10. This implies that the elasticity of Medicare with respect to usual fees is approximately 25 percent. The marginal dollar effect of the usual fee on Medicare allowable fees can be calculated as:

$$dP/dUS = (1-.248) * (\bar{P}/\bar{US})$$
$$= .752 * (\$19.57/\$27.66)$$
$$= .53.$$

On average at the mean, a $1 increase in usual fees implies a $.53 increase in Medicare allowable fees. This .53 constitutes a weighted average of physicians with usual fees that are or are not constrained by the local prevailing fee. The average proportion of the usual fee paid by Medicare equals 75 percent (= .53/.71).

None of the four demand-side variables were statistically significant at conventional levels. We had hypothesized that rapid growth in per capita income would lower make the discount and vice-versa for physicians per capita. Either these variables, in percent change form, are too crudely measured, or they do not reflect the truly important demand-side effects. Changes in insurance coverage, for instance, are not included due to a lack of data for small areas.

It would appear that discount rates are smaller in urban areas (although the t-statistic of 1.4 is not significant at usual levels). The difference is about 3 percentage points. Compared to the (left-out) Northeast region, the Northcentral and South Census regions had larger discount rates (about 6

percentage points less). These differences are not apparent in the descriptive work, where no other variables are held constant.

Of the physician-specific characteristics, only Medicare participation status was statistically significant. According to the regression, participating physicians have Medicare fees that are 3.7 percentage points higher relative to their own usual charges. This variable probably reflects the weaker private demand of participating physicians. That is, participation per se does not lead to smaller Medicare discounts. Rather, a physician's participation status is a proxy for unmeasured private demand factors. Those participating in Medicare and not balance billing presumably are doing so because their own demand is more limited than for non-participants. This, in turn, implies that their usual fees will not be as much above Medicare allowable fees as non-participants'. In technical terms, physician participation status is endogenous because the dependent variable explains it rather than vice-versa.

Twelve specialty dummy variables were included to test for differences in Medicare discount rates relative to (the left-out) general practitioners. The excluded group is arbitrary. Had we chosen the specialty with the highest or lowest discount rate, more coefficients might have appeared significant. Compared to GPs, only two specialties had larger discount rates: other medical specialties and obstetricians-gynecologists. The Medicare discount rate on usual fees was nearly 8 points lower than GPs for OB-GYNs and five points lower for other medical specialties, e.g., gastroenterologists.

Several specialties had smaller discount rates, including ophthalmologists (10.6 percentage points higher), other specialties not classified (9.2 points higher), internists (7.1 points higher), and cardiologists (6.9 points higher). Most carriers recognize specialty differences, which could explain why Medicare discounts are less, assuming specialists locate in better paying Medicare localities. Another possibility is that some specialties rely less on office visits and price them as "loss leaders." This would not explain why internists have lower discounts on usual fees, given their reliance on visits.

The same set of variables perform far less well in explaining Medicare fee comparisons with either Blue Shield or private fees for an intermediate office visit. There is some evidence that Medicare pays relatively better in areas where per capita income is growing faster, but this is counter-intuitive. One would expect Medicare with its MEI constraint to lag behind local insurers when demand is growing. Conversely, it would appear that Medicare is relatively less generous than other insurers in the Northcentral and Western regions, and to obstetricians-gynecologists in particular. None of the other specialty coefficients are significant in either regression (with the marginal exception of orthopedic surgeons in the Blue Shield model). This suggests that while Medicare implicitly discounts the usual office fees of several specialty groups, so do the other insurers, and no bias is introduced against Medicare beneficiaries in favor of privately insured individuals. The negative intercepts, on the other hand, imply an across-the-board 25 percent ($= e^{-.31}$) average arithmetic payment differential between Medicare and other insurers, ceteris paribus.

One should not make too much of these findings relative to other insurers, of course, because of the miniscule explanatory power of the model. Also, we are also speaking only of intermediate office visits. To explain these differences would require much more insurer-specific information on fee setting in local areas.

The model is most effective in explaining Medicare-Medicaid fee differentials. Practically all of the specialist coefficients are positive and significant, reflecting the fact that Medicare pays considerably more than Medicaid for office visits with a specialist. This results from the fact that most state Medicaid programs use a fixed fee schedule for all physicians while Medicare uses a CPR method that historically pays higher-fee specialists more. The coefficients, when exponentiated, imply payment relatives on the order of 18-35 percent higher for specialists (again with the notable exception of obstetricians-gynecologists). This is on top of the effects embedded in the intercept and the other coefficients. For example, for a non-Medicare participating internist living in the urban Northeast, the

predicted Medicare intermediate office visit fee would be double that of Medicaid's, ignoring other area and physician characteristics (which were insignificant in the model).

Besides the specialty characteristics, systematic differences in Medicare-Medicaid fees are found across the four regions. More specifically, Medicare is a relatively better payer in the Northeast--particularly compared to the Northcentral and Southern regions. This undoubtedly reflects the systematically lower Medicaid fees paid to physicians in the Northeast, although Medicare pays a lower percentage of usual fees as well elsewhere in the country (as shown in col. 1).

Finally, urban physicians that treat both Medicaid and Medicare patients patients enjoy relatively higher Medicare fees (roughly 13 percent higher compared to Medicaid).* Again, this reflects the greater sensitivity of Medicare to local market conditions and operating costs than the statewide, fixed fee, Medicaid programs.

5.2 Regression Results for Follow-up Hospital Visit

Similar results are presented in Table 12 for Medicare follow-up hospital fee differentials. The explanatory power of the model is somewhat better for hospital fees than for office fees--particularly when comparing Medicare with private insurer fees. It is possible that physicians had better information when reporting other insurer fees for hospitalized patients.

The Medicare fee elasticity discount on usual fees was nearly identical to that on office visits, 27.5 versus 25 percent. None of the area growth characteristics were significant in explaining discounts, with the notable exception of per capita income in the Blue Shield and private payer models. In these two, income was positive and significant, implying that Medicare pays

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*The Medicare-Medicaid regression is limited to physicians reporting both fees. Physicians not accepting any Medicaid patients did not report what they thought Medicaid was paying and, hence, do not appear in the sample.

TABLE 12

REGRESSION RESULTS EXPLAINING VARIATIONS IN MEDICARE DISCOUNT RATES:FOLLOW-UP HOSPITAL VISIT

	DEPENDENT VARIABLE							
INDEPENDENT VARIABLE	log(MCARE/USUAL) coeff.	(t)	log(MCARE/BS) coeff.	(t)	log(MCARE/PRIV) coeff.	(t)	log(MCARE/MCAID) coeff.	(t)
LN (USUAL)	-0.275	(11.6)	---	---	---	---	---	---
PCMDPOP	-0.016	(-0.5)	-0.018	(0.5)	0.002	(0.1)	-0.029	(-0.6)
PCIPDPO	-0.029	(-0.9)	0.043	(1.0)	0.010	(0.2)	0.130	(2.5)
PCOPVPOP	-0.004	(-0.3)	-0.013	(-0.6)	0.003	(0.2)	-0.005	(-0.2)
PCPCY	0.001	(0.0)	0.229	(4.0)	0.131	(2.3)	-0.047	(-0.6)
URBAN	0.030	(1.3)	-0.022	(-0.8)	-0.050	(-1.8)	0.168	(4.6)
NC	-0.020	(-0.8)	-0.055	(-1.7)	-0.030	(-1.0)	-0.382	(-8.7)
SOUTH	-0.015	(-0.7)	-0.037	(-1.3)	0.007	(0.3)	-0.360	(-9.1)
WEST	0.054	(2.2)	-0.021	(-0.7)	0.017	(0.5)	-0.290	(-6.7)
AGE1	0.001	(1.0)	0.003	(3.1)	0.002	(2.5)	-0.001	(-0.9)
FMG1	-0.025	(-1.2)	0.001	(0.1)	-0.036	(-1.4)	0.032	(0.9)
PART	0.053	(3.0)	0.050	(2.2)	0.044	(2.0)	0.061	(2.0)
FP	-0.003	(-0.1)	0.040	(0.5)	0.015	(0.4)	-0.037	(-0.7)
IM	0.021	(0.7)	0.035	(0.9)	0.046	(1.2)	0.038	(0.7)
CD	0.034	(0.8)	0.044	(0.8)	0.039	(0.7)	0.102	(1.3)
PD	-0.272	(-2.2)	-0.330	(-2.2)	-0.403	(-2.6)	-0.168	(-0.7)
OI	0.040	(1.1)	0.024	(0.5)	0.031	(0.7)	0.115	(1.8)
GS	0.005	(0.1)	0.051	(1.0)	0.040	(0.8)	0.105	(1.5)
OR	0.014	(0.3)	-0.008	(-0.2)	0.037	(0.7)	-0.005	(-0.1)
OP	0.080	(1.6)	0.071	(1.1)	0.077	(1.2)	0.186	(2.0)
UR	-0.010	(-0.2)	0.040	(0.6)	0.050	(0.8)	0.081	(0.8)
OB	-0.139	(-3.1)	-0.232	(-4.1)	-0.245	(-4.2)	-0.093	(-1.1)
OS	0.048	(1.1)	0.027	(0.5)	0.057	(1.1)	0.155	(2.1)
OT	0.079	(1.4)	0.061	(0.9)	0.074	(1.1)	0.181	(1.9)
INTERCEPT	0.504	(4.3)	-0.568	(-5.8)	-0.488	(-5.0)	0.667	(5.0)
R^2 (ADJ)	0.140		0.061		0.042		0.227	
F(DOF)	8.3	(1061)	3.2	(773)	2.7	(855)	10.5	(719)

(t) = t-statistic.

Source: 1983-84 HCFA-NORC Physician Practice Cost and Income Survey.

relatively well compared to other insurers in areas enjoying rapid economic growth. This is inconsistent with the hypothesis that Medicare would be less price competitive in areas with rapid economic growth. Apparently, Medicare fees increase even in areas of strong economic growth.

Other variables that had consistent effects across the two types of visits include participation (always narrowing payment differentials) and FMG status (usually insignificant). Regional effects were of similar sign but more significant in the office visit regressions, implying that regional differences are not as large for hospital as for office visits.

More of the specialty coefficients were insignificant in the hospital fee regressions, suggesting less bias across specialties than for office visits. This was especially true in the Medicare-Medicaid hospital fee equation. For office visits most of these coefficients were highly significant. For those that remain significant in the hospital fee regression, the percentage differences are much lower. This implies that Medicaid is relatively more generous for hospital than office care, although average payments still remain well below Medicare fees.

6.0 SUMMARY AND IMPLICATIONS

In 1984, Medicare paid less than physicians' usual charges, commercial insurers, and Blue Shield, but considerably more than Medicaid. On average, Medicare typically paid about 75 percent of usual charges, 85 percent of commercial insurer fees, 90 percent of Blue Shield fees, and 170 percent of Medicaid fees. The ordering of insurers in this fee hierarchy was quite stable across procedures and specialties, although the magnitude of the Medicare discount relative to the other fees did vary somewhat.

Hence, although physicians may typically prefer commercial and Blue Shield to Medicare enrollees, Medicare fees were competitive with those of other insurers in 1984. Medicare was generally as competitive for the services of specialists as less specialized physicians. We found some evidence that Medicare fees fell relative to other fees (excepting Medicaid)

from 1976 to 1984. This trend probably continued after 1984 because MEI updates to Medicare fees have been low in recent years. Thus, the current relative position of Medicare fees may be somewhat worse than indicated by our 1984 numbers. On the other hand, private insurers have also intensified efforts to control fee inflation through greater use of limits on fee updates, PPOs, etc.

Although all fees are considerably lower in rural areas, Medicare fees stand in the same relation to usual charges, commercial, and Blue Shield fees in rural as in urban areas. We found no evidence that Medicare is "unfair" to rural physicians as opposed to urban physicians, or that rural beneficiaries' access to care is restricted as a result of relatively less generous Medicare payment in rural areas. This is true both when Medicare fees are compared to physicians' actual charges in rural areas and to the fees of other payors. If other insurers' fees remain the same in rural areas, Medicare payments under the RBRVS could exceed those of the other payors, and possibly even what rural physicians currently charge. This may ensure access for Medicare beneficiaries in rural areas and attract more physicians away from the urban centers, but it could also be interpreted as a windfall to rural doctors.

Physician fees vary considerably across regions. The West and Northeast have the highest fees (except for Medicaid in the Northeast) and the Midwest the lowest. The relative fee hierarchy is maintained for the most part in different regions. Medicare seems to pay somewhat better relative to Blue Shield and commercial insurers in the Northeast than in the West.

One striking result of our analysis is the tremendous variation in fees paid to different physicians for the same procedure. This unexplained variation is one of the major reasons for Medicare's scheduled implementation of a relative value scale. In spite of the large variation across physicians in fees, the fees paid by different payors are highly correlated. A physician who is paid more by one payor tends to be paid more by the others. This is a result of the widespread use of similar CPR reimbursement methodologies.

Medicaid fees, however, are less closely related to those of other payors. Many state Medicaid programs set fees on a state-wide basis using

fixed fee schedules rather than using the CPR methodology. There is much less urban-rural differentiation in Medicaid fees than in other fees, and they are very low in the Northeast relative to other fees. Unlike Medicare, Medicaid is less generous to specialists relative to their usual charges and other payors' fees, which may restrict access of Medicaid enrollees to these doctors. Also, Medicaid fees have fallen rapidly relative to Medicare fees over time (in addition to our results, see Cohen, 1989, for confirmation), implying increasingly severe access problems for Medicaid enrollees. Indeed, relatively high Medicare fees may contribute to Medicaid access problems in some areas. The new Congressional mandate that Medicaid fees must be high enough to ensure access to obstetrics and certain other services should raise Medicaid fees for these services in many areas.

We were not able to explain Medicare/usual or Medicare/other payor fee differentials very well in our multivariate analysis. We hypothesized that Medicare discounts relative to other fees would be higher in areas with rapidly-growing private demand. This was not consistently the case in the regression results. Apparently, in spite of the MEI constraints, Medicare is not becoming relatively less competitive in areas with rapidly growing population, per capita income, etc. Participating physicians had smaller Medicare discounts, as would be expected since physicians with weaker private demand are more likely to sign the participation agreement.

What do our findings imply for the implementation of the national Medicare fee schedule? If other insurers' fees remain the same, the consistent relation of Medicare fees to usual charges and other payors' fees will be severely disrupted. Under the RBRVS, Medicare may pay more than charges or other payors for some procedures or in some areas, and much less in other cases. Thus, access may be improved in some cases, and worsened in others. Since visit fees will be raised the most, and surgical fees lowered, access to cognitive services should be improved, and to surgical services lessened. To the extent that widespread unnecessary surgery exists, reduced access to surgeons may not be objectionable. As mentioned above, access in rural areas should be improved, but in urban areas it may worsen.

In areas where Medicaid enrollees receive services, Medicare beneficiaries are not physicians' least-preferred patients because Medicare fees exceed Medicaid fees. In these areas, Medicare could lower fees without significantly restricting access. There would be no reason to raise fees in these areas, or in areas where a high proportion of physicians participate in Medicare, or accept claims on assignment. The fee changes under the RBRVS have little relation to these considerations, however.

Of course, it is likely that other third-party insurers will modify their fee structures in response to Medicare's adoption of a national fee schedule, just as many private insurers adopted DRGs following Medicare's implementation of the PPS. If other insurers adopt a similar relative value scale and geographic cost adjustments, the relationship of Medicare fees to those of other payors will not be as greatly affected by Medicare physician payment reform.

PART II: A COMPARISON OF 1988 MEDICARE PHYSICIAN CHARGES, SIMULATED MEDICARE FEE SCHEDULE AMOUNTS, AND COMMERCIAL INSURER PHYSICIAN CHARGES

7.0 INTRODUCTION TO PART II

In Part I of this report, 1984 Medicare physician fees were compared to physician charges and the fees of other payors using the 1983-84 Physician Practice Cost and Income Survey (PPCIS). These comparisons have several limitations. First, the 1984 fee data are somewhat outdated. Since 184, several important changes in Medicare physician payments have occurred, including fee freezes, tightly constrained fee updates, and actual roll-backs of certain "overpriced" surgical procedure fees. Private insurers have also instituted changes in physician reimbursement, increasing discounting from physician charges through the use of PPOs, IPAs, and fee schedule. Second, the limited sample size of the PPCIS allowed only national, urban-rural, and regional fee comparisons. Fees could not be compared for specific areas. Third, no comparisons to Medicare Fee Schedule (MFS) amounts were made. Since Medicare will begin a transition to the MFS in 1992, such comparisons are of considerable policy interest.

To overcome these limitations, Part II of the report compares 1988 Medicare charges, simulated MFS amounts, and commercial insurer physician charges for specific areas using claims databases. Part II is organized as follows. Chapter 8 describes the Medicare and commercial insurer charge databases used to compute physician fees. Chapter 9 explains the methods used to compute and compare Medicare submitted and allowed charges, commercial insurer submitted and allowed charges, and MFS amounts, including the areas and services chosen for comparison. Chapter 10 presents the comparisons, beginning with summary tables for services and areas. Then, fee comparisons for specific surgical and medical services for specific areas are displayed and discussed. Conclusions and implications are given in Chapter 11.

8.0 DATA

8.1 Medicare Charges and Fee Schedule Payments

The primary source for 1988 Medicare fees was the file of 100 percent Part B claims from ten states maintained by the Center for Health Economics Research (CHER). The ten states are: Alabama, Arizona, Connecticut, Georgia, Kansas, New Jersey, Oklahoma, Oregon, Washington, and Wisconsin. One state, Georgia, did not submit usuable 1988 fee data in time to be included in this analysis. The number of services per claim reported by the insurance carrier for Kansas (excluding Kansas City) was incorrect. For all services except hospital visits, we assumed that the number of services per claim was one. For hospital visits, we processed only claims with the same "from" and "to" data and assumed these claims represented one service. Because of this subsetting, Medicare hospital visit fee data for Kansas (except Kansas City) is based on a smaller number of services than in other areas.

None of the most populous metropolitan areas in the nation are located in the ten study states.* Because large metropolitan areas may be disproportionately affected by the geographic adjustments in the MFS, it was desirable that some of them be included in the analysis. For this reason, the CHER 10-state data was supplemented with HCFA BMAD Procedure File data for the Manhattan, New York City suburbs/Long Island, and Los Angeles Medicare payment localities.

The simulated Medicare Fee Schedule amounts were computed from two data sources:

(1) Physician work, practice expense, and malpractice relative value units provided by HCFA, and

(2) Geographic adjustment factors for Metropolitan Statistical Areas and state nonmetropolitan areas computed from Welch, Zuckerman, and Pope (1989), Table B-1.

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*Since this project was initiated, CHER has added Pennsylvania to its 100 percent Part B data base.

8.2 Commercial Insurer Physician Charges

Commercial insurer physician charges were obtained from the Surgical and Medical Prevailing Healthcare Charges System (PHCS). The PHCS is a database of provider charges for health care services maintained by the Health Insurance Association of America (HIAA). PHCS collects provider charges from more than 100 major contributors, including commercial insurance companies, third-party administrators, Blue Cross and Blue Shield plans, and self-insured groups. The large commercial insurers provide most of the PHCS charge data, and thus, we refer to the data as "commercial insurer physician charges." Data are gathered from all 50 states, the District of Columbia, Puerto Rico, and the Virgin Islands, and are aggregated to the 3-digit zip code level (based on the provider billing address). Physician specialty is not distinguished in the PHCS.

The PHCS is the largest and most comprehensive private national database of its kind. A typical PHCS subscriber is a commercial insurance company that uses the data to establish prevailing charge fee screens (e.g., 90th percentile of area charges) in determining its allowed charges. The PHCS data are available in semiannual "cycles" that do not coincide with calendar years. We acquired surgical charges for March, 1988 through February, 1989 and medical charges for November, 1987 through October, 1988.

9.0 METHODS

9.1 Area Definitions

A major goal of Part II of this report is to compare physician fees in specific geographic areas. The areas should be small enough to be a reasonable representation of "market areas" for physician services, yet large enough so that an accurate charge profile can be established for each area. The main alternatives available for this study were: (1) Metropolitan statistical areas (MSAs) and the nonmetropolitan areas of states; (2) Medicare reasonable charge (payment) localities; and (3) Three digit zip code areas.

The first alternative--MSAs/state nonmetropolitan areas--were chosen as the geographical basis of the study.

MSAs are widely used and understood, and consistently defined agglomerations of economically-related counties. They have been commonly used to define market areas. In contrast, Medicare payment localities do not follow any consistent pattern. They range from statewide areas to portions of individual cities. Similarly, three digit zip codes are defined for the convenience of the Postal Service and are not necessarily a good representation of market areas. When the Medicare Fee Schedule is implemented in 1992, Medicare payment localities will be the payment areas. But at some later time, MSAs may become the geographic basis of payment. Use of MSAs facilitates the application of the Geographic Practice Cost Index (GPCI), which was originally developed on an MSA/state nonmetropolitan area basis (Welch, Zuckerman, and Pope, 1989). Also, other area data (e.g., population) are readily available and easily merged on the MSA level. Finally, MSAs/state nonmetropolitan areas allow a natural urban-rural analysis, a significant advantage given policy concerns over health care in rural areas. Payment localities and three digit zip codes do not adequately distinguish urban and rural areas.

MSAs/state nonmetropolitan areas are employed for the nine CHER states and the Los Angeles MSA in this report. (In Connecticut, New England County Metropolitan Areas were used instead of MSAs, which are not county-based in New England.) However, the aggregated HCFA BMAD file used to calculate Medicare fees for New York precluded the use of MSAs. For the New York City area, fees were tabulated for two Medicare payment localities: (1) Manhattan, and (2) New York City suburbs/Long Island. Isolating fees for Manhattan is valuable because this is a very high-cost area and there is concern about the effects of the MFS on payments in Manhattan.

9.2 Choice of Services for Study

We began with a list of 76 services chosen based on their national share of Medicare allowed charges ad in consultation with HCFA. This, however, was

an unmanageably large number of services for detailed analysis. Moreover, the number of charges in many areas (MSAs or state nonmetropolitan areas) was too small to establish an adequate charge distribution, or even an accurate mean charge.

The number of HIAA PHCS charges was especially small for many services in many areas. Table 13 shows the distribution of the number of HIAA PHCS charges across MSAs, by service. For example, since the median number of charges for repair of femur fracture (CPT-4 27236) is 10, half of the MSAs or nonmetropolitan areas in the nine CHER states (plus Manhattan, NYC suburbs/Long Island, and Los Angeles) had fewer than ten HIAA charges for repair of femur fracture. We judged that roughly 50 charges in an area were necessary to establish an accurate charge distribution. On this criterion, many services shown in Table 13 have too few charges for analysis. The number of Medicare claims was higher on average, but many services also had inadequate numbers of Medicare charges.

We selected a smaller number of services--12 surgical services and 12 medical services--for further analysis. They are displayed in Table 14. Besides having enough charges for meaningful analysis, the most important factor in selecting services was their share of national Medicare allowed charges (we used 1987 aggregate allowed charge figures provided by HCFA). Thus, total hip replacement (CPT-4 27130) was chosen because of large Medicare expenditures on this procedure, even though the number of charges in many areas is small. Of course, this is a procedure more commonly done for the elderly or disabled rather than for young, non-disabled people. To allow meaningful comparisons with private fees, services were included that are reasonably common in the non-Medicare population and have a large number of HIAA claims. Some distribution of types of services, settings, and specialties was also a criterion. Inpatient surgery (e.g., CABG), outpatient surgery (e.g., knee arthoscopy), diagnostic (e.g., sigmoidoscopy), visit, consultation, ad eye exam codes were all chosen. Visits for new patients (e.g., CPT-4 90020) in addition to established patients were chosen. Individual psychotherapy (CPT-4 90844) was included because of its strong association with psychiatrists. Following HIAA, we have

'ABLE 13

DISTRIBUTION ACROSS AREAS[a] OF NUMBER OF COMMERCIAL INSURER (HIAA PHCS) CHARGES, BY SERVICE

CPT-4 CODE Max	SERVICE	PERCENTILES[b] Minimum	10	25	50	75	90	Maximum
27130	Total Hip Replacement	1	4	7	16	38	100	299
27131	Total Hip Replacement	1	1	1	3	8	14	22
27132	Total Hip Replacement	1	1	1	4	9	20	46
27236	Repair of Femur Fracture	1	2	5	10	19	45	189
27244	Repair of Femur Fracture	1	2	5	10	21	54	170
27446	Knee Arthroplasty	1	1	2	4	10	16	124
27447	Knee Arthroplasty	1	6	11	25	57	125	405
29814	Knee Arthroscopy	3	29	54	95	211	554	2,350
31622	Bronchoscopy, Diagnosis	4	12	18	34	107	247	700
31625	Bronchoscopy, with Biopsy	1	6	12	27	84	190	789
31626	Bronchoscopy, Biopsy, Flexible Scope	1	1	1	4	15	45	136
33206	Insertion of Heart Pacemaker	1	1	2	4	11	38	90
33207	Insertion of Heart Pacemaker	1	2	4	7	24	46	120
33208	Insertion of Heart Pacemaker	1	1	2	4	11	38	90
33210	Insertion of Heart Pacemaker	1	2	5	14	48	108	497
33510	CABG 1 Graft	1	2	4	11	32	72	145
33511	CABG 2 Grafts	1	1	5	19	52	135	304
33512	CABG 3 Grafts	1	3	10	28	121	237	678
33513	CABG 4 Grafts	1	2	6	27	64	199	548
33514	CABG 5 Grafts	1	1	4	11	28	70	311
33516	CABG 6+ Grafts	1	1	1	3	11	34	93
33520	CABG 1 Graft, Nonautogenous	1	1	1	1	2	6	10
33525	CABG 2 Grafts, Nonautogenous	1	1	1	1	3	3	3
33528	CABG 3+ Grafts, Autogenous	1	1	1	1	5	8	11
35301	Rechanneling of Artery	1	4	8	19	44	91	391
43235	Upper GI Endoscopy, Diagnosis	15	76	142	333	764	1,596	7,337
43239	Upper GI Endoscopy, Collection of Speciman	9	39	78	186	513	1,164	4,788
44140	Partial Removal of Colon	3	9	15	31	66	282	644
45330	Sigmoidoscopy	64	169	329	566	1,915	5,182	13,811
45378	Diagnostic Colonoscopy	12	59	108	228	759	1,528	6,363
45385	Colonoscopy, Lesion Removal	6	26	53	109	338	859	2,975
47600	Gallbladder Removal	4	9	20	57	139	310	1,541
47605	Gallbladder Removal	3	41	64	114	198	426	1,432
47610	Gallbladder Removal	1	5	9	20	34	78	341
49505	Repair Inguinal Hernia	30	43	73	147	298	876	2,493
52601	Prostatectomy	1	17	42	66	144	364	1,138
55821	Suprapubic Prostatectomy	1	1	2	4	12	23	60
58120	Dilation and Curetage	40	66	101	225	568	1,845	6,769

TABLE 13 (continued)

DISTRIBUTION ACROSS AREAS[a] OF NUMBER OF COMMERCIAL INSURER (HIAA PHCS) CHARGES, BY SERVICE

CPT-4 CODE	SERVICE	PERCENTILES[b] Min	10	25	50	75	90	Max
58150	Total Hysterectomy	27	64	91	182	294	703	2,854
64721	Carpal Tunnel Release	8	25	41	75	173	266	930
66821	Lasering, Secondary Cataract	1	15	33	65	120	321	1,434
66830	Cataract Removal	1	1	2	6	17	40	180
66840	Cataract Removal	1	1	1	2	5	7	24
66850	Cataract Removal	1	1	2	5	10	16	44
66915	Cataract Removal	1	1	1	1	3	3	3
66920	Cataract Removal	1	1	2	3	9	20	53
66930	Cataract Removal	1	1	1	2	4	5	15
66940	Cataract Removal	1	1	2	6	16	40	73
66945	Cataract Removal	1	1	1	2	3	3	3
66983	Remove Cataract, Insert Lens	1	2	4	10	37	92	473
66984	Remove Cataract, Insert Lens	4	51	110	186	397	1,069	3,541
66985	Cataract Removal	1	2	4	9	20	58	210
90020	Office Visit, New, Comprehensive	27	73	183	545	1,431	4,996	26,612
90040	Office Visit, Est., Brief	112	832	1,422	2,550	7,169	13,174	33,215
90050	Office Visit, Est., Limited	473	2,129	4,409	7,747	15,563	34,364	99,204
90060	Office Visit, Est., Intermediate	233	995	2,066	4,891	10,125	28,012	146,992
90070	Office Visit, Extended	44	212	412	929	2,629	5,384	63,551
90080	Office Visit, Comprehensive	44	131	225	634	1,744	10,296	157,050
90215	Initial Hospital Care, Intermediate	12	41	83	194	331	578	1,792
90220	Initial Hospital Care, Comprehensive	45	97	173	555	968	1,891	10,478
90240	Subsequent Hospital Care, Brief	1	34	114	331	721	1,857	3,246
90250	Subsequent Hospital Care, Limited	92	228	391	981	2,199	3,831	15,065
90260	Subsequent Hospital Care, Intermediate	48	116	317	1,132	2,331	4,977	16,912
90270	Subsequent Hospital Care, Extended	5	25	70	267	525	1,384	11,588
90280	Subsequent Hospital Care, Comprehensive	1	5	14	102	294	976	2,999
90620	Comprehensive Consultation	15	57	118	258	787	2,320	13,292
90630	Complex Consultation	1	6	15	45	129	382	9,302
90843	Individual Psychotherapy	12	32	73	154	511	984	3,692
90844	Individual Psychotherapy	14	227	459	1,247	2,522	8,371	47,749
92012	Eye Exam and Treatment	4	14	30	109	290	697	2,132
92014	Eye Exam and Treatment	4	18	37	114	397	1,379	3,691
93000	ECG, with Report	36	192	315	562	1,537	2,672	15,925
93010	ECG, Report Only	1	8	27	98	275	548	2,087
93547	Heart Catheter and Angiogram	1	12	39	105	299	687	3,389
93549	Heart Catheter and Angiogram	1	3	10	46	110	339	1,895
99173	Critical Care, Subsequent, Intermediate	1	7	22	93	201	418	1,887

[a]Areas are the 69 MSAs and nonmetropolitan areas in nine states plus Manhattan and NYC suburbs/Long Island, NY and Los Angeles, CA.

[b]Percentiles are rounded to the nearest integer.

Source: Health Insurance Association of America (HIAA) Prevailing Healthcare Charges System (PHCS).

TABLE 14

SERVICES CHOSEN FOR DETAILED ANALYSIS

SURGICAL SERVICES	
CPT-4 Code	Service
27130	TOTAL HIP REPLACEMENT
29881	KNEE ARTHOSCOPY
33512	CABG, THREE GRAFTS
33513	CABG, FOUR GRAFTS
45378	DIAGNOSTIC COLONOSCOPY
45330	SIGMOIDOSCOPY
47605	REMOVAL OF GALLBLADDER
49505	REPAIR INGUINAL HERNIA
52601	PROSTATECTOMY
58150	TOTAL HYSTERECTOMY
66984	REMOVE CATARACT, INSERT LENS
93547	HEART CATHETER AND ANGIOGRAM

MEDICAL SERVICES	
CPT-4 Code	Service
90020	COMPREHENSIVE OFFICE VISIT, NEW PATIENT
90050	LIMITED OFFICE VISIT, ESTABLISHED PATIENT
90060	INTERMEDIATE OFFICE VISIT, ESTABLISHED PATIENT
90070	EXTENDED OFFICE VISIT, ESTABLISHED PATIENT
90220	COMPREHENSIVE HOSPITAL CARE, NEW PATIENT
90250	LIMITED HOSPITAL VISIT, ESTABLISHED PATIENT
90260	INTERMEDIATE HOSPITAL VISIT, ESTABLISHED PATIENT
90270	EXTENDED HOSPITAL VISIT, ESTABLISHED PATIENT
90620	COMPREHENSIVE CONSULTATION
90844	INDIVIDUAL PSYCHOTHERAPY
92012	EYE EXAM AND TREATMENT
93000	ECG, WITH REPORT

included heart catheter and angiogram (CPT-4 93547) with surgical services in spite of its 90000 code. This is because it is an invasive procedure typically performed in a surgical setting.

9.3 Computation of Medicare Fees

Several edits were performed on the Medicare claims data from the nine CHER states, including:

- All 1988 charges dated before April 1, 1988 were deleted;
- Type of service was limited to medical and surgical services;
- Nonphysician specialties were eliminated; and
- Claims with an allowed charge of zero were dropped.

Charges before April 1, 1988 were dropped because of the overpriced procedure rollbacks and differential primary care/non-primary care Medicare fee updates that occurred at that date. Thus, all Medicare fee data for the nine CHER states reflects charges after these adjustments. Of course, the more recent 1990 overpriced procedure reductions and differential updates legislated in OBRA 1989 are not captured in our 1988 data. Although nonphysician socialties (e.g., chiropractors) were deleted, physician specialties were not distinguished. This is to make the 1988 Medicare data more comparable to the HIAA data and the Medicare Fee Schedule, which do not distinguish specialty.

The geographic location of each claim was determined by merging on the provider zip code from the insurance carrier's provider directory. Location thus corresponds to the provider's billing address. A zip code to county crosswalk was used to aggregate claims to the county; then a county to MSA crosswalk brought the claims to the MSA/state nonmetropolitan area level. Mean submitted charge, mean allowed charge, and percent of claims that were assigned were computed from the claims grouped by MSA/state nonmetropolitan area.

Average Medicare fees for New York and Los Angeles were computed from the 1988 HCFA BMAD procedure file. The same edits that were applied to the

CHER nine-state claims were employed for the BMAD file. However, because the BMAD file is aggregated--not claims level--we were unable to drop charges before April 1, 1988. Thus, Medicare fees for New York ad Los Angeles refer to the entire calendar year 1988. Fee data were calculated for two New York Medicare payment localities: Manhattan and New York City suburbs/Long Island. As a group, the eight Los Angeles Medicare payment localities coincide with Los Angeles County, which is also the Los Angeles MSA. Hence, the Los Angeles fees were computed by combining fee data from these eight localities.

9.4 Computation of Medicare Fee Schedule

The Medicare Fee Schedule involves three components: relative value units (RVUs), Geographic Adjustment Factors (GAFs), and an overall conversion factor. The fee for a service is:

$$F = (RVU_{wk} * GAF_{wk}) + (RVU_{oh} * GAF_{oh}) + RVU_{mp} * GAF_{mp}),$$

where

F = the Medicare Fee Schedule amount,
RVU_{wk} = the service's relative value for physician work,
RVU_{oh} = the service's relative value for practice overhead,
RVU_{mp} = the service's relative value for malpractice,
GAF_{wk} = the geographic adjustment factor for physician work,
GAF_{oh} = the geographic adjustment factor for practice overhead, and
GAF_{mp} = the geographic adjustment factor for malpractice expense.

Relative value units were provided by HCFA. The RVUs were in calendar 1988 dollars so no conversion factor adjustment was necessary for this study. Unfortunately, at the time this report was written no RVUs were available for two services that we had selected for analysis: heart catheter and angiogram (CPT-4 93547) and individual psychotherapy (CPT-4 90844). Medicare Fee Schedule amounts could not be calculated for these two services, but they were retained in the analysis for comparison of 1988 Medicare fees to commercial insurer fees.

Geographic adjustment factors were computed for each MSA and state nonmetropolitan area from the components of the Geographic Practice Cost index

(GPCI) reported in Welch, Zuckerman, and Pope (1989), Table B-1. As is specified in the MFS legislation, a one-quarter physician work geographic adjustment factor was computed. We used the MSA/state nonmetropolitan area version of the GAFs because MSAs are a leading candidate to eventually become the payment areas, and because they were the original basis for data gathering from which the GPCI was developed. However, other areas, including current Medicare payment localities and states are also being considered as the ultimate geographic basis of the MFS. For the 1992 implementation of transition to the MFS, the current localities will be the payment areas. MFS amounts calculated using these alternatives will differ from the amounts we have calculated. In most cases, the differences will be fairly small.

The simulated MFS amounts that we use in this report should generally provide a reasonably accurate representation of the MFS payment amounts. Nevertheless, all elements of the MFS--the relative value units, the geographic adjustment factors, and the overall conversion factor--are sujbect to change and may be modified from what is simulated in this report. Thus, all fee comparisons involving the MFS amounts are subject to the caveat that the actual MFS fees may differ from what is reported here.

9.5 Computation of Commercial Insurer Fees

The only geographic identification on the HIAA PHCS file is three digit zip code. To aggregate the claims to an MSA/state nonmetropolitan area basis we developed a crosswalk between three digit zip codes and MSAs. This crosswalk is imperfect because zip code areas do not follow county boundaries. For example, it is not unusual for three digit zip code areas to combine metropolitan and nonmetropolitan counties, or to include parts of several MSAs. However, the correspondence between three digit zip codes and MSAs is generally reasonable.

Once HIAA claims were aggregated to the MSA/state nonmetropolitan area, mean submitted charges and percentiles of the charge distribution were calculated. Unfortunately, the PHCS database does not contain information on what insurers actually pay physicians, only on the charges submitted by

providers. Thus, we were forced to simulate commercial insurers' allowed charges (which include beneficiary deductible and copayment liability amounts, as do Medicare allowed charges).

Experts at HIAA informed us that commercial insurers typically use only an area prevailing charge screen in calculating allowed charges. Physician-specific customary screens are generally not used. Moreover, prevailing screens are based on the most current 6 to 12 months of charge distributions; commercial insurers typically do not constrain the rate of increase in prevailing charges as does Medicare through the Medicare Economic Index. The prevailing charge is most commonly established as the 90th percentile of area charges.

Based on this information, we simulated allowed charges for each MSA (or nonmetropolitan area) by (1) calculating the 90th percentile of area charges for each service, and (2) setting charges exceeding the 90th percentile equal to it. Given the information available to us, this is the best estimate of commercial insurer allowed charges that we could make. Nevertheless, it has several limitations. First, commercial insurers may use some geographic basis other than MSAs (perhaps states) to establish their prevailing charge screens. Second, they may use a percentile other than the 90th to establish the area prevailing charge. According to HIAA, the range of percentiles used is from the 80th to the 95th. We performed a sensitivity analysis that showed that the mean allowed charge is generally insensitive to this range of percentile cutoffs. Third, insurers may use a non-UCR methodology to reimburse providers such as a fee schedule or capitation (e.g., through a PPO or IPA). These nontraditional forms account for about one-quarter of commercial insurers' business, and the proportion is growing. Our simulated allowed charges do not capture geographic variation in the extent of commercial insurer discounting of physician charges. If our estimates of commercial alloweds are inaccurate, we believe they are likely to be overestimates.

The mean allowed charge computed using the 90th percentile prevailing charge screen is generally only about one percent less than the mean submitted

charge.* This seems inconsistent with the approximately 10 percent discount of commercial from usual fees implied by our analysis in Part I of this report with the 1983-84 PPCIS data. The reason for this discrepancy seems to be the patient copayment. Our simulated allowed charge includes the patient copayment. Conversely, the PPCIS asked physicians to report "how much does the major private insurance company pay you for [service]?" Since the physician would be payed the allowed charge less the patient copayment (or deductible) by the insurance company, the fee reported on the PPCIS would be less than the commercial insurer allowed charge. This could account for the greater discount implied by the PPCIS than our simulation with the HIAA data.

9.6 Explanation of Fee Comparison Tables

We computed 1988 Medicare, commercial insurer, and Medicare Fee Schedule fees for 24 services (see Section 9.2) in 69 areas (see Section 9.1). Fees for 69 areas cannot be presented concisely. In our analysis there are three types of areas: (i) large metropolitan areas, (ii) other, smaller metropolitan areas, and (iii) state nonmetropolitan areas. Fees for the largest metropolitan area in each of the nine CHER states, plus fees for Manhattan, NYC suburbs/Long Island, Los Angeles, and for each of the eight state nonmetropolitan areas (New Jersey has no nonmetropolitan area) can be shown. This leaves 49 mostly less populous MSAs in the nine CHER states. We decided to group these smaller MSAs by state and show only the state averages, weighted by the number of charges for a service in each MSA. Since the number of charges in many of the smaller MSAs is limited, this averaging also improves the accuracy of the reported fees. Hence, we report fees for 29 areas: (1) Twelve large metropolitan areas--the largest MSA in each of the nine CHER states plus Manhattan, NYC suburbs/Long Island, and Los Angeles;

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*It may be surprising that the 90the percentile fee screen reduces the average charge by only one percent. Recall, however, that only 10 percent of services and charges are affected by the screen, and that, assuming a uniform fee distribution at the upper level of charges, only the very highest charges are reduced by as much as 10 percent.

(2) Nine state "other metropolitan" areas--a weighted average of all MSAs except the largest in each of the nine CHER states; and (3) Eight state nonmetropolitan areas.

The fee comparisons for each service are contained in two tables, an "A" table and a "B" table. The "A" table reports the following information for each of the 29 areas:

- the number of Medicare services;
- the mean Medicare submitted charge;
- the mean Medicare allowed charge;
- the Medicare Fee Schedule amount;
- the percentage of Medicare charges that were assigned;
- the number of charges in the HIAA PHCS database;
- the mean commercial insurer (HIAA PHCS) submitted charge;
- the simulated mean commercial insurer allowed charge.

Unweighted averages are provided for each of the three area categories of "largest metropolitan," "other metropolitan," and "nonmetropolitan." To facilitate comparison among these three categories for the nine CHER states, Manhattan, NYC suburbs/Long Island, and Los Angeles are excluded from the average for the "largest metropolitan" category.

The "B" table for each service presents fee ratios from the "A" table to allow easy fee comparisons. It contains:

- the mean Medicare allowed charge as a percentage of:

  (1) the mean Medicare submitted charge, and
  (2) the simulated mean commercial insurer (HIAA PHCS) allowed charge;

- the Medicare Fee Schedule Amount as a percentage of:

  (1) the mean Medicare submitted charge,
  (2) the mean Medicare allowed charge, and
  (3) the simulated mean commercial insurer (HIAA PHCS) allowed charge.

In addition, the "B" table presents

- the percentile of the HIAA PHCS charge distribution corresponding to:

(1) the mean Medicare allowed charge, and
(2) the Medicare Fee Schedule amount.

Percentiles of the HIAA PHCS charge distribution from 0ther (minimum charge) to 100th (maximum charge) were computed in five percentile increments; also, the 1st and 99th percentiles were calculated. The percentile closest to the mean Medicare allowed charge or the MFS amount is reported. If the Medicare amount was less than the lowest HIAA charge, "<0" is shown in the table. As with the "A" table, unweighted averages for the three categories of "largest metropolitan," "other metropolitan," and "nonmetropolitan" are provided. In calculating these averages for the percentiles, "<0" is set to "0."

The percentile statistics provide a different fee comparison than the ratio of means. A mean Medicare allowed that is simultaneously a large percentage of the commercial allowed (say 70 percent) and a low percentile of the commercial charge distribution (say the 10th) is not a contradiction. For example, in Manhattan, New York, the mean 1988 Medicare allowed charge of $3,604 was 65 percent of the mean commercial allowed charge of $5,546. However, the mean Medicare allowed was closest to the 10th percentile of the commercial charge distribution, $3,920. (The 10th percentile means that 10 percent of the commercial submitted charges were less than $3,920 and 90 percent exceeded $3,920.)

In general, if the commercial charge distribution is symmetric about its mean and Medicare paid the same amount, on average, as commercial insurers, the mean Medicare allowed would equal the 50th percentile (median) of the commercial charge distribution. If Medicare pays less, on average, than commercial insurers, the mean Medicare charge will equal less than the 50th percentile of commercial charges. If the commercial fee distribution is compressed (i.e., most charges are close to the average), then it is quite possible that Medicare could simultaneously pay close to the average commercial charge, but at a low percentile of the commercial charge distribution. Since at least about 50 charges are necessary to establish an accurate charge distribution, the percentile statistics for services/areas with less than 50 commercial charges should be regarded with caution.

Tables A and B for each of the 24 services are presented and discussed in Sections 10.2 (surgical services) and 10.3 (medical services). Before considering individual services in specific areas, however, we present several summary tables in Section 10.1. Two basic summary tables are presented: one for services (an average across areas), and one for areas (an average across services). The summary table for areas is subdivided into one for surgical services, one for medical services, and one for all services. Thus, there are a total of four summary tables.

The summary tables are modelled on the "B" table for individual services. The summary table for services is a weighted average of the area values in Table B for each service. The weight is the number of charges in an area for a service, which is shown in each service's Table A. In addition to the fee ratios and percentiles, the weighted average percentage of assigned claims is also shown in the summary table. Because of their large population, Manhattan, NYC suburbs/Long Island, and Los Angeles are weighted heavily in the area average summary table whereas nonmetropolitan areas are not highly weighted. We tested the sensitivity of the area averages to the weights by also calculating an unweighted average table. Although the specific numerical values change somewhat, the qualitative results from the weighted and unweighted tables are similar; hence, we show only the weighted table.

The summary values for services should <u>not</u> be interpreted as national averages since they are derived from only nine states plus two New York City area localities in Los Angeles. Moreover, we did not attempt to weight or extrapolate these areas to represent the nation. Nevertheless, the geographic dispersion in the nine states and three large metropolitan areas implies that the summary values may bear a reasonably close relationship to national average values.*

The summary tables for areas are a weighted average of the "B" tables for individual services. An average for surgical services and one for medical

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*CHER's 10-state database represents about 20% of national Medicare volume (Georgia is excluded from the analysis in this report) and we have added the New York City area and Los Angeles.

services were computed separately. Each service was weighted by its share of (1987) aggregate Medicare allowed charges among the 12 surgical or the 12 medical services we analyze. Then, a simple (unweighted) average of the surgical and medical values was taken to form an overall index for each area. A simple average was used because the share of surgical and medical services in aggregate Medicare allowed charges is almost identical (each about 40 percent in 1987).

The summary values for medical services may be more representative of all medical services than are the summary values for surgical services representative of all surgical services. This is because the 12 medical services we study include many of the most common office visits, hospital visits, and other medical services whereas our 12 surgical services are only a small sample of the thousands of surgical procedures. Among the surgical services, a very large weight (about 50 percent) is given to cataract surgery (CPT-4 66984) because it accounts for a large amount of Medicare payments relative to the other surgical procedures we study. We computed unweighted surgical and medical averages to test the sensitivity of the summary tables to the large weights given to certain services, especially cataract surgery. As is true of the service summary table, numerical values change somewhat, but qualitative conclusions are unaffected by weighting. Thus, we report only the weighted results.

10.0 RESULTS

10.1 Summary Table for Services

Table 15 summarizes relationships among 1988 Medicare charges, commercial insurer charges, and simulated 1988 Medicare Fee Schedule amounts for 12 surgical and 12 medical services. The table shows weighted averages of values for metropolitan and nonmetropolitan areas in nine states in addition to Manhattan and New York suburbs/Long Island, New York, and Los Angeles, California. Because of their large number of charges, the latter three areas

TABLE 15

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES BY SERVICE: WEIGHTED AREA AVERAGE, 1988

	MEDICARE ALLOWED CHARGE AS A PERCENT. OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:		
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule	Percent Assigned
Surgical Services								
Hip Replacement (CPT-4 27130)	69%	66%	67%	97%	64%	12th	11th	59%
Knee Arthroscopy (CPT-4 29881)	65	66	51	79	52	12	8	62
CABG, 3 Grafts (CPT-4 33512)	77	85	52	68	58	23	17	79
CABG, 4 Grafts (CPT-4 33513)	79	87	53	68	59	23	16	79
Sigmoidosocopy (CPT-4 45330)	66	65	91	139	89	10	41	57
Colonoscopy (CPT-4 45378)	77	76	59	76	57	12	6	75
Gallbladder Rem. (CPT-4 47605)	74	77	59	79	61	17	14	65
Hernia Repair (CPT-4 49505)	70	68	50	71	48	13	8	62
Prostatectomy (CPT-4 52601)	72	73	61	84	61	7	5	60
Hysterectomy (CPT-4 58150)	59	60	44	73	44	12	9	63
Remove Cataract (CPT-4 66984)	72	73	64	89	64	10	7	83
Heart Catheter (CPT-4 93547)	77	75	.	.	.	8	.	70
Average	71	73	59	84	60	13	13	68

TABLE 15 (continued)

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES BY SERVICE: WEIGHTED AREA AVERAGE, 1988

Medical Services	MEDICARE ALLOWED CHARGE AS A PERCENT OF: Medicare Submitted	MEDICARE ALLOWED CHARGE AS A PERCENT OF: HIAA Allowed	MEDICARE FEE SCHEDULE AS A PERCENTAGE OF: Medicare Submitted	MEDICARE FEE SCHEDULE AS A PERCENTAGE OF: Medicare Allowed	MEDICARE FEE SCHEDULE AS A PERCENTAGE OF: HIAA Allowed	PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO: Medicare Allowed	PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO: Medicare Fee Schedule	Percent Assigned
Off. Visit, Comp. (CPT-4 90020)	69%	72%	72%	106%	76%	30th	33rd	69%
Off. Visit, Ltd. (CPT-4 90050)	76	75	87	114	85	11	25	57
Off. Visit, Int. (CPT-4 90060)	76	76	88	115	87	13	31	66
Off. Visit, Ext. (CPT-4 90070)	80	76	91	114	87	18	36	71
Hosp. Care, Comp. (CPT-4 90220)	67	65	86	131	83	15	29	75
Hosp. Care, Ltd. (CPT-4 90250)	75	65	82	110	70	9	17	72
Hosp. Care, Int. (CPT-4 90260)	73	63	87	121	76	8	24	79
Hosp. Care, Ext. (CPT-4 90270)	73	62	96	133	81	11	33	83
Comp. Consult. (CPT-4 90620)	75	78	76	101	79	22	25	77
Psychotherapy (CPT-4 90844)	68	81	.	.	.	29	.	82
Eye Exam (CPT-4 92012)	80	78	73	92	71	22	18	71
ECG w/report (CPT-4 93000)	83	82	56	67	55	13	3	63
Average	75	72	81	109	77	17	25	72

Note: This table is a weighted average of values for metropolitan and nonmetropolitan areas in nine states, and values for Manhattan and NYC suburbs/Long Island, NY, and Los Angeles, CA. See after Table S24-A for source notes.

are weighted heavily in the results. Simple (unweighted) averages of the values for surgical and for medical services as a group are also given.

In 1988, Medicare's mean allowed fee was about three-quarters of physicians' mean submitted charge for these 24 services, on average. Medicare's discount from submitted charges ranked from a high of 41 percent for total hysterectomy to only 17 percent for ECG with report. About 70 percent of Medicare charges were assigned. Surgical services differed little from medical services in average discount or assignment rate.

For the average service, the mean Medicare CPR fee was about 72 percent of the mean commercial insurer fee (both including beneficiary copayment and deductible). Among studied services, mean Medicare CPR allowed charges ranged from 60 percent to 87 percent of mean commercial insurer allowed charges. Medicare CPR paid most generously relative to commercial insurers for CABG (86 percent as much), psychotherapy (81 percent as much), and ECG with report (82 percent as much). Medicare was least competitive for hysterectomy (paying 60 percent as much). Medicare paid relatively less than commercial insurers for hospital visits (about 64 percent as much) than for office visits (about 75 percent as much). On average, Medicare paid at about the 15th percentile of the commercial insurer (HIAA PHCS) charge distribution. That is, typically he average Medicare fee for a service exceeded 15 percent of charges submitted to commercial insurers for that service and was less than 85 percent of the commercial charges.

Table 16 suggests that the implementation of the Medicare Fee Schedule (MFS) will cause significant realignments in the relationship between Medicare and commercial fees if commercial fees do not change. On average, the Medicare allowed as a percentage of the commercial allowed will fall from 73 percent to only 60 percent for surgical services, whereas for medical services, the average will rise from 72 percent to 77 percent. Some large surgical reductions: Medicare CABG fees would fall from 86 percent as much to 58 percent as much as private fees, or from the 23rd to the 17th percentile of the HIAA PHCS charge distribution; payment for diagnostic colonoscopy would be 57 percent as much instead of 76 percent as much; Medicare knee arthoscopy fees would average about one-half as much as commercial fees instead of

TABLE 16

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES BY AREA: WEIGHTED SURGICAL SERVICES AVERAGE, 1988

	MEDICARE ALLOWED CHARGE AS A PERCENT OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]		
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule	Percent Assigned
Large Metropolitan								
Manhattan, NY	65%	68%	49%	77%	51%	13th	8th	74%
NYC Suburbs-L.I., NY	68	70	54	80	56	12	6	72
Los Angeles, CA	70	81	52	74	60	19	13	92
Birmingham, AL	79	80	63	82	64	7	5	90
Phoenix, AZ	76	83	58	77	64	18	14	76
Hartford, CT	73	72	67	92	66	8	7	83
Kansas City, KS	77	83	64	84	69	14	10	96
Newark, NJ	69	59	71	103	59	8	7	69
Oklahoma City, OK	76	79	64	84	65	12	9	75
Portland, OR	79	83	66	84	69	11	9	75
Seattle, WA	77	78	69	91	71	12	12	55
Milwaukee, WI	75	75	68	92	70	6	8	77
Average[b]	76	77	66	88	66	11	9	77
Other Metropolitan								
Alabama	73	68	73	102	66	8	8	89
Arizona	73	80	57	78	62	14	12	85
Connecticut	73	71	64	87	62	8	8	78
Kansas	77	82	70	91	74	14	12	93
New Jersey	71	60	75	106	62	7	7	64
Oklahoma	77	79	67	88	69	11	11	74
Oregon	77	77	66	86	66	12	11	61
Washington	79	84	68	86	72	21	12	69
Wisconsin	77	74	69	89	67	7	7	59
Average	75	75	68	90	67	11	10	75
Non-Metropolitan								
Alabama	77	78	62	82	63	14	10	83
Arizona	74	78	55	74	57	5	2	84
Connecticut	76	77	66	88	66	6	2	71
Kansas	82	84	72	87	71	11	6	92
Oklahoma	75	75	64	87	66	5	10	78
Oregon	76	79	64	84	66	5	6	60
Washington	79	77	72	91	70	6	8	65
Wisconsin	79	75	69	89	67	5	4	50
Average	77	78	66	85	66	7	6	73

Note: This table is a weighted average of values for the 12 surgical services shown in Table 14. See after Table S24-B for notes.

two-thirds as much. Under the MFS, Medicare fees for hysterectomy and hernia repair would be less than half as much as the private fee, on average. The lone exception to the pattern of declining Medicare surgical fees is sigmoidoscopy; it would rise from being relatively poorly paid to being by far the most generously paid of the surgical services studied here, reaching the 41st percentile of the private charge distribution. Its relatively low 1988 assignment rate of 57 percent perhaps indicates underpayment by Medicare compared to other insurers, but whether a fee increase of the size that will occur under the MFS is necessary to make Medicare competitive is not clear.

Among medical services, office and hospital visit fees will rise so that under the MFS, Medicare will pay at least three-quarters as much as commercial insurers for all visits considered here, except limited subsequent hospital care. The Medicare fee will achieve at least the 24th percentile of the private fee distribution for all visits except the same hospital visit. For several visits, Medicare will be paying 90 percent or more of physicians' 1988 submitted charges. Two medical services on our list--eye exam and treatment and ECG with report--will see reductions, however. The reduction for ECG will be particularly sharp, from 82 percent to 55 percent of the commercial fee, or from the 13th to the 3rd percentile of the private charge distribution. Its below average assignment rate of 63 percent can be expected to decline further.

10.2 Summary Tables for Areas

Tables 16, 17, and 18 present relationships among 1988 Medicare charges, commercial insurer charges, and simulated Medicare Fee Schedule amounts by area. Table 16 gives weighted average values for 12 surgical services, Table 17 for 12 medical services, and Table 18 is an all-services average. The weights are the shares of each service in national Medicare allowed charges. In each table, unweighted averages are also given for each of the three area categories: (1) large metropolitan--the largest metropolitan areas in each of nine states; (2) other metropolitan areas in the nine states; and (3) nonmetropolitan areas in the nine states. To facilitate comparison among the three different types of areas for the nine states, Manhattan, New York

TABLE 17

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES BY AREA: WEIGHTED MEDICAL SERVICES AVERAGE, 1988

	MEDICARE ALLOWED CHARGE AS A PERCENT. OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]		
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule	Percent Assigned
Large Metropolitan								
Manhattan, NY	71%	71%	61%	87%	60%	19th	10th	74%
NYC Suburbs-L.I., NY	67	66	81	123	78	11	25	69
Los Angeles, CA	76	73	72	96	69	12	10	87
Birmingham, AL	77	81	88	114	91	17	34	86
Phoenix, AZ	82	82	83	101	83	20	23	64
Hartford, CT	81	79	92	113	89	17	31	84
Kansas City, KS	72	75	90	126	93	13	34	84
Newark, NJ	77	73	91	117	86	16	32	57
Oklahoma City, OK	77	76	90	119	90	18	33	51
Portland, OR	80	76	92	115	87	13	30	55
Seattle, WA	74	67	89	121	80	8	19	46
Milwaukee, WI	79	61	94	118	71	13	30	70
Average[b]	78	74	90	116	86	15	30	66
Other Metropolitan								
Alabama	75	73	99	132	96	11	41	80
Arizona	83	81	91	109	88	18	34	73
Connecticut	80	77	89	112	86	18	29	73
Kansas	75	79	88	118	92	19	39	85
New Jersey	76	71	95	126	89	13	37	57
Oklahoma	77	76	89	115	87	18	35	56
Oregon	81	72	93	114	83	9	21	42
Washington	80	75	95	119	89	11	31	55
Wisconsin	77	58	97	127	71	11	30	53
Average	78	74	93	119	87	14	33	64
Non-Metropolitan								
Alabama	75	76	103	138	105	18	50	88
Arizona	80	83	87	109	90	21	36	71
Connecticut	84	78	97	114	90	14	32	73
Kansas	79	84	91	116	97	24	44	84
Oklahoma	78	75	101	130	97	21	47	60
Oregon	80	80	92	113	91	20	38	44
Washington	81	78	95	118	92	19	35	42
Wisconsin	81	69	104	127	83	17	46	49
Average	80	78	96	121	93	19	41	64

Note: This table is an weighted average of values for the 12 medical services shown in Table 14. See after Table S24-B for notes.

TABLE 18

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES BY AREA: WEIGHTED ALL-SERVICE AVERAGE, 1988

	MEDICARE ALLOWED CHARGE AS A PERCENT OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]		
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule	Percent Assigned
Large Metropolitan								
Manhattan, NY	68%	70%	55%	82%	56%	16th	9th	74%
NYC Suburbs-L.I., NY	68	68	68	102	67	12	16	71
Los Angeles, CA	73	77	62	85	65	16	12	90
Birmingham, AL	78	81	76	98	78	12	20	88
Phoenix, AZ	79	83	71	89	74	19	19	70
Hartford, CT	77	76	80	103	78	13	19	84
Kansas City, KS	75	79	77	105	81	14	22	90
Newark, NJ	73	66	81	110	73	12	20	63
Oklahoma City, OK	77	78	77	102	78	15	21	63
Portland, OR	80	80	79	100	78	12	20	65
Seattle, WA	76	73	79	106	76	10	16	51
Milwaukee, WI	77	68	81	105	71	10	19	74
Average[b]	77	76	78	102	76	13	19	72
Other Metropolitan								
Alabama	74	71	86	117	81	10	25	85
Arizona	78	81	74	94	75	16	23	79
Connecticut	77	74	77	100	74	13	19	76
Kansas	76	81	79	105	83	17	26	89
New Jersey	74	66	85	116	76	10	22	61
Oklahoma	77	78	78	102	78	15	23	65
Oregon	79	75	80	100	75	11	16	52
Washington	80	80	82	103	81	16	22	62
Wisconsin	77	66	83	108	69	9	19	56
Average	77	74	80	105	77	13	21	69
Non-Metropolitan								
Alabama	76	77	83	110	84	16	30	86
Arizona	77	81	71	92	74	13	19	78
Connecticut	80	78	82	101	78	10	17	72
Kansas	81	84	82	102	84	18	25	88
Oklahoma	77	75	83	109	82	13	29	69
Oregon	78	80	78	99	79	13	22	52
Washington	80	78	84	105	81	13	22	54
Wisconsin	80	72	87	108	75	11	25	50
Average	79	78	81	103	79	13	24	68

Note: This table is an unweighted average of the values in Table 16 (surgical services) and Table 17 (medical services). See after Table S24-B for footnotes.

City suburbs/Long Island, and Los Angeles are excluded from the "large metropolitan" average.

Average 1988 Medicare fees ranged from 66 percent to 84 percent as much as average commercial insurer fees across areas (Table 18). Areas in or near New York City had lower Medicare fees relative to physician submitted and commercial insurer fees than most other areas in 1988. For example, in New Jersey Medicare fees were only 66 percent as much as commercial fees and 74 percent of what physicians charged (Table 18). These areas will fare differently under the MFS. In Manhattan, Medicare fees will fall to 56 percent of commercial insurer fees and 55 percent of what physicians charge from 70 percent and 68 percent, respectively (Table 18). Average Medicare medical fees in Manhattan will fall from 71 percent to 60 percent of commercial fees (Table 17) and average surgical fees from 68 percent to 51 percent (Table 16). Under the MFS, Manhattan is clearly the worst-paid area relative to physician charges and commercial insurer fees among those we study. Conversely, in the NYC suburbs/Long Island payment locality, relative fees for the average service will not change (Table 18). The drop in surgical fees will be offset by a rise in medical fees. In New Jersey, surgical fees will remain about constant and medical fees will rise substantially. Overall, New Jersey Medicare fees will rise relative to physician charges and commercial fees.

Like Manhattan, Los Angeles will see a large decline in fees when the MFS is implemented, from 77 percent to 65 percent relative to commercial fees (Table 18). Manhattan and Los Angeles are the only studied areas where average Medicare fees for Medical services will decline under the MFS (Table 17). Los Angeles will see only a small decline in average medical fees, but a large decline in relative Medicare surgical fees, from 81 percent to 60 percent of the mean commercial surgical fee (Table 16). However, lower fees may be of less concern in Los Angeles than Manhattan because of its much higher average assignment rate (90 percent compared to 74 percent--Table 18). Average Medicare fees in Arizona, which are currently among the highest relative to private fees, will also decline significantly under the MFS (Table 18). In addition to New Jersey, Medicare fees will rise significantly

in other metropolitan (e.g., Mobile) and nonmetropolitan Alabama, even though high assignment rates indicate that Medicare is currently quite competitive in Alabama. Average MFS medical fees will exceed what commercial insurers pay in nonmetropolitan Alabama (Table 17), the only area where this is true. Overall, under the MFS, Medicare will pay from 56 percent to 84 percent as much as commercial insurers across our areas (Table 18).

On average, Medicare fees will rise more in smaller metropolitan and nonmetropolitan areas than in large metropolitan areas. Medicare fees are a constant percentage of mean commercial fees, 76 percent, on average, in large metropolitan areas (and recall that this average does not include Los Angeles or the two New York localities), but rise from 74 to 77 percent in smaller metropolitan areas, and from 78 to 79 percent in nonmetropolitan areas (Table 18). Average Medicare fees will rise to the 24th percentile of the private charge distribution in nonmetropolitan areas compared to the 21st in smaller metropolitan and the 19th in larger metropolitan areas. This is a reflection of the adjustment for only one-quarter of physician time costs in the Geographic Adjustment Factor employed in the MFS. Manhattan and Los Angeles are particularly disadvantaged by the lack of a full physician time adjustment. Average Medicare fees there will only be at the 9th and the 12th percentiles, respectively, of the private charge distribution.

Medicare will be more competitive in buying medical services than surgical services in all areas. For medical services, the area averages of mean Medicare fees relative to mean private fees for large metropolitan, other metropolitan, and nonmetropolitan are 86 percent, 87 percent, and 93 percent, respectively (Table 17), but only 66 percent, 67 percent, and 66 percent for surgical services (Table 16). On average, mean Medicare fees for medical services are at the 41st percentile of the commercial fee distribution in nonmetropolitan areas, which should help ensure access to primary care services for Medicare beneficiaries in rural areas.

10.3 Results for Individual Services by Area

The remainder of Chapter 10 discusses relationships among 1988 Medicare, our simulated Medicare Fee Schedule (MFS), and commercial insurer fees for 24 individual services by area. For each service, two tables are presented that will be discussed together. They are labelled "Table Sx-A" and "Table Sx-B," where x is the order in which the service is discussed, 1 to 24. The "A" table for each service shows the 1988 mean Medicare submitted charge, mean Medicare allowed charge, simulated MFS amount, percent of charges that were assigned, commercial insurer (HIAA PHCS) mean submitted charge, and commercial insurer simulated mean allowed charge. The number of charges ("N") on which the Medicare and commercial insurer fee statistics are based is also given.

The "B" table for each service is similar to the area summary tables discussed in Section 10.2. It displays ratios of mean fees from the Table A. The mean Medicare allowed charge as a percentage of the mean Medicare submitted charge and the mean commercial insurer (HIAA) allowed charge, and the MFS amount as a percentage of the mean Medicare submitted, the mean Medicare allowed, and the mean commercial insurer allowed are shown. In addition, Table B contains the percentile of the commercial insurer charge distribution which is closest to the mean Medicare allowed and the MFS amount. The symbols "<0" denote that the Medicare fee is less than the lowest private charge.

Statistics are given for the same three sets of areas in Table A and Table B. The first category includes the largest metropolitan area in each of nine states--Alabama, Arizona, Connecticut, Kansas, New Jersey, Oklahoma, Oregon, Washington, and Wisconsin--and Manhattan, New York, New York City suburbs/Long Island, New York, and Los Angeles, California. The second category is a weighted average of all metropolitan areas other than the largest in each of the nine states, and the third category is the nonmetropolitan area of eight states (New Jersey has no nonmetropolitan area). For each statistic, a simple (unweighted) average is given for each of the three area categories. To facilitate comparison among the three types of areas for the nine states, the two New York localities and Los Angeles are excluded from the "largest metropolitan" average.

Many of the fee relationships are similar among the different services and were apparent in the summary tables discussed in Sections 10.1 and 10.2. These include:

- the mean Medicare submitted, mean commercial insurer submitted, and mean commercial insurer allowed charges are similar;
- the mean Medicare allowed charge is about 70-75 percent of the mean submitted charge and the commercial insurer allowed charge;
- all fees tend to be highest in the largest metropolitan areas, and lowest in nonmetropolitan areas. Manhattan had particularly high 1988 Medicare fees;
- relationships among 1988 Medicare and commercial fees were similar in the largest metropolitan, other metropolitan, and nonmetropolitan areas;
- assignment rates tended to be similar in the three types of areas;
- the MFS tends to lower fees for surgical services and raise them for medical services;
- the MFS tends to raise fees in nonmetropolitan areas and lower them in the largest metropolitan areas. Manhattan and Los Angeles are particularly disadvantaged by the MFS;
- the MFS reduces fee differences among areas.

To avoid unnecessary repetition in discussing results for individual services, we will concentrate on patterns that deviate from these generalizations, or are of particular interest for a specific service. We will find that significant exceptions to the general patterns occur for particular areas and service.

10.3.1 Surgical Services

The current pattern of Medicare fees for total hip replacement (CPT-4 27130) seems to be more random than usual. Pope et al., (1989) found that little of the fee variation for this procedure could be explained by practice cost differences. As a consequence, several areas in each of the three categories--large metropolitan, other metropolitan, and nonmetropolitan--will see increases in their average Medicare fees under the MFS, whereas others

will see decreases (Tables S1-A and S1-B). The increases occur in spite of the appearance of total hip replacement on overpriced procedure lists, and demonstrate the impact of the geographic cost adjustments in the MFS.

Among the largest metropolitan areas, Milwaukee had a particularly low 1988 average fee of $1,699 and will see a 25 percent average increase under the MFS to $2,117. New Jersey will also experience significant fee increases; for example, in Newark, the mean fee will increase by 13 percent, from $2,100 to $2,380. This should improve the low 30 percent assignment rate there.

Average Medicare hip replacement fees will fall by 24 percent in Manhattan under the MFS, to less than half the commercial insurer fee if there is no response by commercial insurers to Medicare fee reductions. This may be of some concern given the low 40 percent assignment rate in Manhattan. Fees will also decline sharply in Alabama, but assignment rates are much higher there, reaching 100 percent in rural Alabama. Further, MFS amounts are 60 percent or more of commercial insurer alloweds in Alabama compared to 49 percent in Manhattan.

MFS fees for knee arthoscopy (CPT-4 29881) are particularly low in several areas compared to commercial fees (Tables S2-A and S2-B). For example, the MFS pays $869 in Phoenix, Arizona compared to an estimated commercial insurer fee of $2,054. In eleven of the 29 areas we study the MFS fee is less than half of the private amount. In Manhattan, the ratio is one-third, down from 42 percent in 1988. Los Angeles and Phoenix will see a 36 percent reduction in average knee arthoscopy fees under the MFS, although fees will rise in other metropolitan Connecticut (e.g., New Haven, Bridgeport).

Medicare paid more on average in 1988 for three-graft CABGs than estimated mean commercial insurer fees in several areas (Tables S3-A and S3-B). These were: Los Angeles, Phoenix, and other metropolitan Oregon (e.g., Eugene), Kansas (e.g., Wichita), and Washington (e.g., Spokane). Relatively generous Medicare payments for CABG are presumably associated with its above average assignment rates in most areas. However, the MFS will sharply reduce CABG fees. For example, the average fee in Los Angeles will fall by 34 percent, from $5,006 to $3,158. In Manhattan, the average fee will fall nearly in half, from $6,145 to $3,448, or from the 15th to the 1st

TABLE S1-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: TOTAL HIP REPLACEMENT (CPT-4 27130), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	1,028	$5,222	$3,604	$2,736	40%	299	$5,595	$5,546
NYC Suburbs-L.I., NY[f]	1,123	4,694	2,925	2,725	54	196	5,050	4,976
Los Angeles, CA[f]	1,745	4,727	2,923	2,553	79	299	4,513	4,474
Birmingham, AL	93	3,613	2,691	2,021	95	39	3,395	3,363
Phoenix, AZ	377	3,551	2,457	2,262	53	145	3,458	3,370
Hartford, CT	197	3,687	2,402	2,284	95	123	3,671	3,635
Kansas City, KS	70	2,976	2,222	2,162	91	18	2,555	2,547
Newark, NJ	299	3,162	2,100	2,380	30	90	4,010	3,994
Oklahoma City, OK	236	2,808	2,125	2,005	37	39	2,967	2,964
Portland, OR	206	3,349	2,223	2,207	72	48	3,200	3,180
Seattle, WA	385	2,991	2,066	2,271	44	78	3,209	3,177
Milwaukee, WI	382	2,346	1,699	2,117	66	123	2,428	2,398
Average[g]	249	3,165	2,221	2,190	65	78	3,210	3,181
Other Metropolitan								
Alabama	145	3,049	2,381	1,990	90	52	3,086	3,084
Arizona	85	3,349	2,287	2,217	44	25	2,995	2,991
Connecticut	267	3,793	2,637	2,364	94	89	4,109	4,053
Kansas	262	2,690	1,960	2,054	86	26	2,616	2,616
New Jersey	1,006	2,972	1,914	2,405	54	320	3,704	3,670
Oklahoma	131	2,914	1,901	1,990	46	50	3,166	3,148
Oregon	192	2,795	2,065	2,157	29	39	2,783	2,777
Washington	467	2,837	2,300	2,180	59	130	2,772	2,765
Wisconsin	664	2,629	2,065	2,016	42	365	2,850	2,841
Average	358	3,003	2,168	2,153	60	122	3,120	3,105
Non-Metropolitan								
Alabama	32	3,165	2,407	1,912	100	6	2,659	2,659
Arizona	69	3,556	2,494	2,117	33	16	4,174	4,150
Connecticut	30	3,392	1,979	2,188	93	2	4,250	4,250
Kansas	191	2,698	1,974	1,908	98	9	2,606	2,606
Oklahoma	117	2,663	1,845	1,859	42	4	2,832	2,831
Oregon	197	3,013	2,150	2,120	32	7	3,517	3,517
Washington	187	2,912	2,209	2,145	46	6	2,521	2,520
Wisconsin	225	2,499	1,975	1,933	39	10	2,711	2,709
Average	131	2,987	2,129	2,023	60	8	3,159	3,155

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S1-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: TOTAL HIP REPLACEMENT (CPT-4 27130), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	69%	65%	52%	76%	49%	10th	5th
NYC Suburbs-L.I., NY	62	59	58	93	55	5	5
Los Angeles, CA	62	65	54	87	57	15	10
Birmingham, AL	74	80	56	75	60	10	10
Phoenix, AZ	69	73	64	92	67	20	20
Hartford, CT	65	66	62	95	63	10	10
Kansas City, KS	75	87	73	97	85	25	20
Newark, NJ	66	53	75	113	60	5	5
Oklahoma City, OK	76	72	71	94	68	10	10
Portland, OR	66	70	66	99	69	10	10
Seattle, WA	69	65	76	110	71	15	15
Milwaukee, WI	72	71	90	125	88	10	25
Average[b]	70	71	70	100	70	13	14
Other Metropolitan							
Alabama	78	77	65	84	65	0	0
Arizona	68	76	66	97	74	30	30
Connecticut	70	65	62	90	58	15	15
Kansas	73	75	76	105	79	20	20
New Jersey	64	52	81	126	66	10	15
Oklahoma	65	60	68	105	63	0	0
Oregon	74	74	77	104	78	30	30
Washington	81	83	77	95	79	25	20
Wisconsin	79	73	77	98	71	10	10
Average	72	71	72	100	70	16	16
Non-Metropolitan							
Alabama	76	91	60	79	72	25	20
Arizona	70	60	60	85	51	0	0
Connecticut	58	47	65	111	51	<0	<0
Kansas	73	76	71	97	73	<0	<0
Oklahoma	69	65	70	101	66	<0	<0
Oregon	71	61	70	99	60	<0	<0
Washington	76	88	74	97	85	25	25
Wisconsin	79	73	77	98	71	10	0
Average	72	70	68	96	66	8	6

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S2-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: KNEE ARTHROSCOPY (CPT-4 29881), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	291	$3,271	$1,358	$1,063	58%	750	$3,281	$3,216
NYC Suburbs-L.I., NY[f]	293	2,823	1,286	1,058	46	1,106	2,758	2,708
Los Angeles, CA[f]	893	2,669	1,545	986	84	2,350	2,066	2,017
Birmingham, AL	38	1,818	1,311	770	92	208	1,654	1,610
Phoenix, AZ	143	2,048	1,354	869	75	731	2,078	2,054
Hartford, CT	65	1,496	923	878	97	561	1,518	1,491
Kansas City, KS	52	1,314	965	829	98	192	1,267	1,260
Newark, NJ	88	1,870	1,298	915	45	506	2,183	2,152
Oklahoma City, OK	75	1,205	877	764	32	444	1,400	1,362
Portland, OR	129	1,428	945	847	74	343	1,396	1,379
Seattle, WA	181	1,285	965	871	44	480	1,460	1,440
Milwaukee, WI	87	1,072	931	808	61	471	1,170	1,159
Average[g]	95	1,504	1,063	839	69	437	1,570	1,545
Other Metropolitan								
Alabama	68	1,618	1,297	761	82	497	1,672	1,660
Arizona	31	1,766	1,314	851	48	134	1,867	1,842
Connecticut	104	1,773	868	923	88	904	1,697	1,672
Kansas	60	1,214	1,062	783	95	177	1,174	1,166
New Jersey	296	1,790	1,131	929	49	1,763	2,149	2,128
Oklahoma	57	1,580	839	763	49	269	1,449	1,438
Oregon	65	1,278	872	829	22	235	1,456	1,443
Washington	244	1,156	897	835	61	473	1,197	1,187
Wisconsin	267	1,144	908	771	39	1,365	1,262	1,254
Average	132	1,480	1,021	827	59	646	1,547	1,532
Non-Metropolitan								
Alabama	12	1,436	1,124	725	58	22	1,556	1,514
Arizona	38	2,004	1,310	810	45	108	2,106	2,085
Connecticut	4	1,783	953	839	100	30	1,544	1,525
Kansas	27	1,312	1,028	725	100	64	1,221	1,216
Oklahoma	55	1,148	817	703	47	72	1,251	1,247
Oregon	177	1,330	921	812	36	65	1,444	1,422
Washington	101	1,143	908	821	44	76	1,263	1,263
Wisconsin	75	993	845	735	40	75	1,220	1,210
Average	61	1,394	988	771	59	64	1,451	1,435

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S2-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: KNEE ARTHROSCOPY (CPT-4 29881), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	42%	42%	32%	78%	33%	1st	1st
NYC Suburbs-L.I., NY	46	47	37	82	39	5	5
Los Angeles, CA	58	77	37	64	49	25	15
Birmingham, AL	72	81	42	59	48	25	10
Phoenix, AZ	66	66	42	64	42	10	5
Hartford, CT	62	62	59	95	59	5	5
Kansas City, KS	73	77	63	86	66	10	10
Newark, NJ	69	60	49	70	43	5	1
Oklahoma City, OK	73	64	63	87	56	5	5
Portland, OR	66	69	59	90	61	10	10
Seattle, WA	75	67	68	90	60	10	10
Milwaukee, WI	87	80	75	87	70	10	5
Average[b]	71	70	58	81	56	10	7
Other Metropolitan							
Alabama	80	78	47	59	46	5	<0
Arizona	74	71	48	65	46	10	5
Connecticut	49	52	52	106	55	10	15
Kansas	87	91	64	74	67	20	10
New Jersey	63	53	52	82	44	5	5
Oklahoma	53	58	48	91	53	10	5
Oregon	68	60	65	95	57	5	5
Washington	78	76	72	93	70	15	10
Wisconsin	79	72	67	85	61	10	5
Average	70	68	57	83	55	10	7
Non-Metropolitan							
Alabama	78	74	50	65	48	<0	<0
Arizona	65	63	40	62	39	5	<0
Connecticut	53	62	47	88	55	<0	<0
Kansas	78	85	55	71	60	30	10
Oklahoma	71	66	61	86	56	5	0
Oregon	69	65	61	88	57	5	5
Washington	79	72	72	90	65	20	20
Wisconsin	85	70	74	87	61	10	5
Average	72	70	58	80	55	9	5

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S3-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: CABG, 3 GRAFTS (CPT-4 33512), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	886	$8,388	$6,145	$3,448	91%	274	$8,069	$8,051
NYC Suburbs-L.I., NY[f]	673	6,119	5,205	3,453	43	272	6,403	6,392
Los Angeles, CA[f]	926	6,916	5,006	3,158	96	678	4,712	4,646
Birmingham, AL	162	4,245	3,540	2,470	100	184	3,860	3,844
Phoenix, AZ	238	4,817	4,021	2,813	74	277	3,990	3,959
Hartford, CT	229	4,113	3,217	2,791	76	220	5,018	4,968
Kansas City, KS	45	4,276	3,175	2,688	100	27	3,531	3,513
Newark, NJ	210	5,223	3,471	2,929	90	126	5,895	5,855
Oklahoma City, OK	202	4,705	3,964	2,394	85	238	4,043	4,016
Portland, OR	163	4,867	3,772	2,697	77	81	4,818	4,745
Seattle, WA	274	4,852	4,155	2,790	32	130	4,220	4,182
Milwaukee, WI	328	5,383	4,096	2,543	88	233	5,262	5,238
Average[g]	206	4,720	3,712	2,679	80	168	4,515	4,480
Other Metropolitan								
Alabama	94	4,077	3,433	2,445	100	111	3,740	3,723
Arizona	35	5,389	4,283	2,763	97	51	4,525	4,496
Connecticut	238	5,529	4,089	2,879	79	207	6,161	6,123
Kansas	235	3,650	3,136	2,508	94	86	3,046	3,011
New Jersey	685	5,544	3,653	3,036	81	660	5,841	5,777
Oklahoma	71	5,120	3,996	2,414	99	63	4,367	4,272
Oregon	81	4,054	3,617	2,642	63	38	3,572	3,553
Washington	245	5,040	4,165	2,664	73	78	4,007	3,985
Wisconsin	171	4,325	3,494	2,435	47	176	4,989	4,973
Average	206	4,748	3,763	2,643	81	163	4,472	4,435
Non-Metropolitan								
Alabama	16	6,271	3,577	2,351	100	15	4,978	4,978
Arizona	.	.	.	2,654	.	4	4,465	4,465
Kansas	.	.	.	2,329	.	4	4,525	4,525
Oklahoma	.	.	.	2,234	.	3	4,270	4,270
Oregon	15	4,586	3,765	2,600	67	7	4,245	4,245
Wisconsin	37	5,316	3,538	2,337	62	1	5,950	5,950
Average	23	5,391	3,627	2,418	76	6	4,739	4,739

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S3-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: CABG, 3 GRAFTS (CPT-4 33512), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	73%	76%	41%	56%	43%	15th	1st
NYC Suburbs-L.I., NY	85	81	56	66	54	15	10
Los Angeles, CA	72	108	46	63	68	45	40
Birmingham, AL	83	92	58	70	64	15	10
Phoenix, AZ	83	102	58	70	71	35	30
Hartford, CT	78	65	68	87	56	15	15
Kansas City, KS	74	90	63	85	77	35	30
Newark, NJ	66	59	56	84	50	20	15
Oklahoma City, OK	84	99	51	60	60	30	25
Portland, OR	78	79	55	72	57	10	5
Seattle, WA	86	99	58	67	67	30	25
Milwaukee, WI	76	78	47	62	49	5	1
Average[b]	79	85	57	73	61	22	17
Other Metropolitan							
Alabama	84	92	60	71	66	25	20
Arizona	79	95	51	65	61	40	30
Connecticut	74	67	52	70	47	10	5
Kansas	86	104	69	80	83	35	30
New Jersey	66	63	55	83	53	15	15
Oklahoma	78	94	47	60	57	20	15
Oregon	89	102	65	73	74	30	30
Washington	83	105	53	64	67	55	15
Wisconsin	81	70	56	70	49	10	<0
Average	80	88	56	71	62	27	18
Non-Metropolitan							
Alabama	57	72	37	66	47	30	25
Arizona	.	.	.	.	59	.	<0
Kansas	.	.	.	.	51	.	<0
Oklahoma	.	.	.	.	52	.	40
Oregon	82	89	57	69	61	20	20
Wisconsin	67	59	44	66	39	<0	<0
Average	69	73	46	67	52	17	14

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

percentile of the private charge distribution. Under the MFS, this procedure will be reimbursed at a five dollar lower rate in Manhattan than in NYC suburbs/Long Island, compared to the current Manhattan premium of nearly $1,000 (Table S3-A). In no area will Medicare CABG fees increase. Fee patterns are similar for four-graft CABG (Tables S4-A and S4-B); Phoenix and other metropolitan Kansas and Oregon were the areas where 1988 average Medicare fees exceeded private fees.

Sigmoidoscopy is an anomaly among surgical procedures in that the MFS will substantially raise average Medicare fees in all areas. In the nine states we study, the average fee in the largest metropolitan areas will increase from $87 to $130, in other metropolitan areas from $86 to $128, and in nonmetropolitan areas from $85 to $122 (Table S5-A). In many areas Medicare will pay more than physicians charge, on average, more than the mean commercial insurer fee, and above the 50th percentile of the private charge distribution (Table S5-B). Nevertheless, in certain areas--New York, New Jersey, Los Angeles, and rural Alabama and Connecticut--Medicare payment will be less generous relative to commercial insurers (Table S5-B).

Physicians performing diagnostic colonoscopies will not fare as well under the MFS. Hartford, Connecticut is the only area that will see an increase (Tables S6-A and S6-B). Most areas will experience substantial decreases. MFS fees for this procedure are slightly lower relative to commercial fees, on average, in nonmetropolitan areas than in metropolitan areas in the nine states (Table S6-B). For example, in rural Oklahoma the MFS amount is only $263 compared to a $538 mean commercial fee.

The pattern of fees for gallbladder removal (Tables S7-A and S7-B), inguinal hernia repair (Tables S8-A and S8-B), prostatectomy (Tables S9-A and S9-B), and total hysterectomy (Tables S10-A and S10-B) are generally similar. Although overall the MFS will reduce payments for these procedures, there will be a wide range across areas in payment reductions. For example, in Manhattan, the gallbladder removal fee will be cut by more than 50 percent, from $2,112 to $968, but Seattle will see only a 7 percent reduction. In Manhattan, the Medicare fee will fall to only about one-third of the

TABLE S4-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: CABG, 4 GRAFTS (CPT-4 33513), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	521	$8,413	$6,643	$3,696	82%	207	$8,290	$8,249
NYC Suburbs-L.I., NY[f]	436	6,565	5,678	3,702	53	223	6,712	6,684
Los Angeles, CA[f]	894	6,910	4,982	3,387	95	548	5,406	5,341
Birmingham, AL	123	4,571	3,973	2,651	100	154	4,272	4,226
Phoenix, AZ	165	5,052	4,235	3,018	69	195	3,994	3,941
Hartford, CT	173	5,787	4,558	2,994	100	201	5,006	4,941
Kansas City, KS	11	4,504	3,588	2,884	100	16	4,184	4,184
Newark, NJ	159	6,602	4,434	3,142	91	108	5,821	5,754
Oklahoma City, OK	161	5,268	4,013	2,570	89	154	4,601	4,560
Portland, OR	113	5,173	3,990	2,893	86	70	4,549	4,485
Seattle, WA	338	4,628	3,907	2,994	43	102	4,771	4,711
Milwaukee, WI	282	5,494	4,414	2,729	82	241	5,404	5,365
Average[g]	169	5,231	4,124	2,875	84	138	4,734	4,685
Other Metropolitan								
Alabama	92	4,518	3,853	2,625	99	112	4,143	4,116
Arizona	22	5,258	4,121	2,964	100	43	4,269	4,248
Connecticut	128	5,887	4,423	3,081	85	112	5,513	5,436
Kansas	169	4,054	3,475	2,681	86	72	3,210	3,192
New Jersey	378	5,843	4,045	3,255	82	336	6,330	6,280
Oklahoma	87	6,027	4,632	2,591	100	74	5,148	5,095
Oregon	117	4,358	3,904	2,832	68	38	3,453	3,448
Washington	257	5,546	4,553	2,858	76	84	4,933	4,927
Wisconsin	233	4,501	3,732	2,605	63	163	4,802	4,769
Average	165	5,110	4,082	2,832	84	115	4,645	4,612
Non-Metropolitan								
Alabama	5	6,897	3,998	2,524	100	10	5,721	5,721
Arizona	.	.	.	2,848	.	1	4,806	4,806
Oklahoma	.	.	.	2,399	.	2	2,910	2,909
Oregon	17	4,975	4,017	2,789	53	5	3,984	3,984
Washington	1	5,421	4,087	2,842	100	.	.	.
Wisconsin	38	5,560	3,777	2,508	50	1	6,238	6,238
Average	15	6,713	3,970	2,614	76	4	4,732	4,732

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S4-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: CABG, 4 GRAFTS (CPT-4 33513), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	79%	81%	44%	56%	45%	10th	5th
NYC Suburbs-L.I., NY	86	85	56	65	55	15	10
Los Angeles, CA	72	93	49	68	63	35	30
Birmingham, AL	87	94	58	67	63	10	10
Phoenix, AZ	84	107	60	71	77	40	40
Hartford, CT	79	92	52	66	61	25	10
Kansas City, KS	80	86	64	80	69	20	15
Newark, NJ	67	77	48	71	55	20	15
Oklahoma City, OK	76	88	49	64	56	25	20
Portland, OR	77	89	56	73	65	25	20
Seattle, WA	84	83	65	77	64	20	15
Milwaukee, WI	80	82	50	62	51	10	5
Average[b]	79	89	56	70	62	22	17
Other Metropolitan							
Alabama	85	94	58	68	64	25	10
Arizona	78	97	56	72	70	40	35
Connecticut	75	81	52	70	57	20	15
Kansas	86	109	66	77	84	35	35
New Jersey	69	64	56	80	52	10	10
Oklahoma	77	91	43	56	51	35	10
Oregon	90	113	65	73	82	65	30
Washington	82	92	52	63	58	35	10
Wisconsin	83	78	58	70	55	10	5
Average	81	91	56	70	64	31	18
Non-Metropolitan							
Alabama	58	70	37	63	44	25	20
Arizona	.	.	.	.	59	.	<0
Oklahoma	.	.	.	.	82	.	45
Oregon	81	101	56	69	70	35	25
Washington	75	.	52	70	.	.	.
Wisconsin	68	61	45	66	40	<0	<0
Average	71	77	48	67	59	20	18

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S5-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: SIGMOIDOSCOPY (CPT-4 45330), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	7,404	$209	$118	$153	63%	5,779	$226	$201
NYC Suburbs-L.I., NY[f]	20,947	198	108	152	59	13,811	216	202
Los Angeles, CA[f]	21,209	204	138	146	77	12,479	201	188
Birmingham, AL	738	142	63	122	94	1,200	140	136
Phoenix, AZ	6,642	145	109	132	48	5,756	159	150
Hartford, CT	3,929	146	119	134	84	6,893	150	143
Kansas City, KS	1,305	134	85	127	83	1,324	133	127
Newark, NJ	5,077	160	98	139	56	5,199	184	175
Oklahoma City, OK	1,003	123	72	122	43	1,108	137	128
Portland, OR	2,170	102	79	130	42	2,172	116	112
Seattle, WA	5,087	110	84	134	35	3,357	129	125
Milwaukee, WI	5,026	125	78	128	62	6,125	120	113
Average[g]	3,442	132	87	130	61	3,682	141	134
Other Metropolitan								
Alabama	1,152	108	60	121	66	2,173	131	127
Arizona	1,521	127	94	130	75	837	127	123
Connecticut	5,447	158	121	139	74	6,931	166	162
Kansas	1,779	134	92	124	73	1,121	130	128
New Jersey	15,865	182	107	139	54	18,547	192	184
Oklahoma	2,555	96	70	123	24	2,094	104	101
Oregon	2,163	102	83	127	24	1,248	113	111
Washington	5,155	102	76	130	29	3,370	117	115
Wisconsin	4,939	104	72	123	43	12,257	110	107
Average	4,508	124	86	128	51	5,398	132	129
Non-Metropolitan								
Alabama	815	124	57	117	84	475	156	154
Arizona	995	174	111	125	56	541	164	150
Connecticut	402	135	116	129	75	166	188	178
Kansas	2,768	132	88	116	82	452	133	128
Oklahoma	1,784	137	79	116	46	346	137	133
Oregon	2,262	107	85	126	38	228	118	116
Washington	3,176	108	76	127	17	371	100	97
Wisconsin	5,229	94	68	118	40	816	122	119
Average	2,179	126	85	122	55	424	140	134

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S5-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: SIGMOIDOSCOPY (CPT-4 45330), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	56%	59%	73%	130%	76%	10th	35th
NYC Suburbs-L.I., NY	55	53	77	141	75	10	25
Los Angeles, CA	68	73	72	106	78	15	20
Birmingham, AL	44	46	86	194	90	5	60
Phoenix, AZ	75	73	91	121	88	15	35
Hartford, CT	82	83	92	113	94	20	35
Kansas City, KS	63	67	95	149	100	5	45
Newark, NJ	61	56	87	142	79	10	30
Oklahoma City, OK	59	56	99	169	95	10	50
Portland, OR	77	71	127	165	116	10	75
Seattle, WA	76	67	122	160	107	5	55
Milwaukee, WI	62	69	102	164	113	5	80
Average[b]	67	65	100	153	98	9	52
Other Metropolitan							
Alabama	56	47	112	202	95	5	60
Arizona	74	76	102	138	106	5	65
Connecticut	77	75	88	115	86	10	30
Kansas	69	72	93	135	97	5	50
New Jersey	59	58	76	130	76	10	25
Oklahoma	73	69	128	176	122	10	85
Oregon	81	75	125	153	114	15	70
Washington	75	66	127	171	113	5	75
Wisconsin	69	67	118	171	115	5	80
Average	70	67	108	155	103	8	60
Non-Metropolitan							
Alabama	46	37	94	205	76	5	45
Arizona	64	74	72	113	83	20	25
Connecticut	86	65	96	111	72	10	15
Kansas	67	69	88	132	91	5	30
Oklahoma	58	59	85	147	87	5	35
Oregon	79	73	118	148	109	10	55
Washington	70	78	118	167	131	10	90
Wisconsin	72	57	126	174	99	5	70
Average	68	64	100	150	94	9	46

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S6-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: DIAGNOSTIC COLONOSCOPY (CPT-4 45378), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	8,740	$687	$485	$377	71%	3,909	$707	$692
NYC Suburbs-L.I., NY[f]	16,199	672	488	375	79	6,363	686	677
Los Angeles, CA[f]	9,517	721	514	355	93	5,076	687	671
Birmingham, AL	772	466	393	284	98	1,005	475	466
Phoenix, AZ	1,757	510	435	315	68	1,533	513	507
Hartford, CT	2,384	352	305	320	90	2,181	469	462
Kansas City, KS	905	526	492	301	99	588	504	499
Newark, NJ	2,746	531	442	332	69	1,990	591	585
Oklahoma City, OK	1,265	462	381	284	59	971	475	470
Portland, OR	719	401	345	309	59	441	410	403
Seattle, WA	1,595	463	383	317	35	803	510	505
Milwaukee, WI	1,217	559	441	299	72	1,057	567	562
Average[g]	1,484	474	402	307	72	1,174	502	495
Other Metropolitan								
Alabama	1,130	435	366	280	80	1,764	447	444
Arizona	792	544	350	308	95	415	567	565
Connecticut	2,379	482	355	330	74	2,589	493	481
Kansas	1,008	483	407	288	68	506	505	499
New Jersey	8,622	554	457	333	75	7,824	588	581
Oklahoma	1,274	414	331	284	59	1,007	438	435
Oregon	512	453	363	302	42	269	501	500
Washington	1,671	456	394	305	41	876	493	489
Wisconsin	1,786	512	421	286	62	2,260	565	561
Average	2,130	481	383	302	66	1,946	511	506
Non-Metropolitan								
Alabama	686	452	374	269	92	310	443	439
Arizona	467	557	439	294	76	123	533	528
Connecticut	116	488	429	306	82	36	441	438
Kansas	1,497	502	399	268	93	184	527	524
Oklahoma	944	465	368	263	64	259	540	538
Oregon	598	440	336	297	50	55	469	468
Washington	896	462	405	299	26	70	510	505
Wisconsin	1,083	496	398	273	44	353	524	520
Average	786	483	394	284	66	174	498	495

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S6-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: DIAGNOSTIC COLONOSCOPY (CPT-4 45378), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	71%	70%	55%	78%	54%	10th	5th
NYC Suburbs-L.I., NY	73	72	56	77	55	10	5
Los Angeles, CA	71	77	49	69	53	15	5
Birmingham, AL	84	84	61	72	61	5	1
Phoenix, AZ	85	86	62	72	62	10	5
Hartford, CT	87	66	91	105	69	15	15
Kansas City, KS	94	99	57	61	60	20	5
Newark, NJ	83	76	63	75	57	15	10
Oklahoma City, OK	82	81	61	75	60	10	5
Portland, OR	86	86	77	90	77	10	10
Seattle, WA	83	76	68	83	63	5	5
Milwaukee, WI	79	78	53	68	53	10	5
Average[b]	85	81	66	78	62	11	7
Other Metropolitan							
Alabama	84	82	64	77	63	10	5
Arizona	64	62	57	88	55	5	5
Connecticut	74	74	68	93	69	20	20
Kansas	84	82	60	71	58	20	5
New Jersey	82	79	60	73	57	15	10
Oklahoma	80	76	69	86	65	5	5
Oregon	80	73	67	83	60	5	5
Washington	86	81	67	77	62	10	5
Wisconsin	82	75	56	68	51	5	1
Average	80	76	63	80	60	11	7
Non-Metropolitan							
Alabama	83	85	60	72	61	10	1
Arizona	79	83	53	67	56	10	5
Connecticut	88	98	63	71	70	45	25
Kansas	79	76	53	67	51	10	5
Oklahoma	79	68	57	71	49	10	5
Oregon	76	72	68	88	63	10	10
Washington	88	80	65	74	59	0	0
Wisconsin	80	77	55	69	53	10	5
Average	82	80	59	72	58	13	7

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S7-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: GALLBLADDER REMOVAL (CPT-4 47605), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	289	$3,116	$2,112	$968	66%	181	$2,800	$2,772
NYC Suburbs-L.I., NY[f]	724	2,490	1,569	967	64	605	2,389	2,333
Los Angeles, CA[f]	1,072	1,918	1,333	901	86	1,432	1,693	1,664
Birmingham, AL	116	1,263	1,072	722	93	325	1,184	1,165
Phoenix, AZ	424	1,419	1,087	806	66	948	1,297	1,285
Hartford, CT	159	1,204	889	807	95	321	1,342	1,328
Kansas City, KS	147	1,306	928	772	95	305	1,116	1,096
Newark, NJ	229	1,547	1,093	843	72	451	1,650	1,624
Oklahoma City, OK	415	1,165	903	708	53	780	1,119	1,105
Portland, OR	164	1,183	965	781	70	227	1,138	1,133
Seattle, WA	350	1,166	864	806	45	386	1,205	1,185
Milwaukee, WI	348	1,023	836	748	72	562	1,047	1,038
Average[g]	261	1,253	960	777	73	478	1,233	1,218
Other Metropolitan								
Alabama	268	1,130	904	713	89	719	1,105	1,088
Arizona	130	1,361	1,072	792	55	144	1,255	1,251
Connecticut	198	1,477	983	837	94	432	1,511	1,495
Kansas	199	1,007	802	728	88	306	998	987
New Jersey	780	1,519	1,038	844	63	1,438	1,511	1,485
Oklahoma	267	1,166	921	706	40	539	1,175	1,165
Oregon	208	1,073	848	764	30	262	1,168	1,160
Washington	413	1,085	859	781	47	549	1,147	1,141
Wisconsin	522	989	779	719	47	1,267	1,068	1,061
Average	332	1,201	912	765	61	628	1,215	1,204
Non-Metropolitan								
Alabama	109	1,150	912	689	82	106	1,104	1,090
Arizona	114	1,320	978	762	61	121	1,248	1,236
Connecticut	24	1,420	1,080	775	88	3	1,334	1,334
Kansas	356	1,068	826	683	92	179	944	929
Oklahoma	282	1,126	852	664	63	178	1,149	1,141
Oregon	296	1,068	818	754	33	58	1,062	1,061
Washington	247	1,064	854	765	32	47	1,103	1,095
Wisconsin	332	942	779	689	42	126	1,067	1,056
Average	220	1,145	887	723	62	102	1,126	1,118

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S7-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: GALLBLADDER REMOVAL (CPT-4 47605), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	68%	76%	31%	46%	35%	20th	5th
NYC Suburbs-L.I., NY	63	67	39	62	41	10	5
Los Angeles, CA	69	80	47	68	54	25	20
Birmingham, AL	85	92	57	67	62	15	10
Phoenix, AZ	77	85	57	74	63	25	20
Hartford, CT	74	67	67	91	61	5	5
Kansas City, KS	71	85	59	83	70	25	20
Newark, NJ	71	67	54	77	52	15	10
Oklahoma City, OK	78	82	61	78	64	20	15
Portland, OR	82	85	66	81	69	15	10
Seattle, WA	74	73	69	93	68	15	15
Milwaukee, WI	82	81	73	89	72	15	15
Average[b]	77	80	63	81	65	17	13
Other Metropolitan							
Alabama	80	83	63	79	66	20	15
Arizona	79	86	58	74	63	20	15
Connecticut	67	66	57	85	56	10	10
Kansas	80	81	72	91	74	20	15
New Jersey	68	70	56	81	57	15	15
Oklahoma	79	79	61	77	61	15	10
Oregon	79	73	71	90	66	15	10
Washington	79	75	72	91	68	15	10
Wisconsin	79	73	73	92	68	15	15
Average	77	76	65	84	64	16	13
Non-Metropolitan							
Alabama	79	84	60	76	63	20	15
Arizona	74	79	58	78	62	20	15
Connecticut	76	81	55	72	58	< 0	< 0
Kansas	77	89	64	83	74	25	20
Oklahoma	76	75	59	78	58	15	15
Oregon	77	77	71	92	71	15	15
Washington	80	78	72	90	70	15	15
Wisconsin	83	74	73	88	65	15	10
Average	78	80	64	82	65	16	13

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S8-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: REPAIR INGUINAL HERNIA (CPT-4 49505), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	1,193	$1,531	$1,122	$514	55%	889	$1,657	$1,615
NYC Suburbs-L.I., NY[f]	3,180	1,331	816	513	58	2,463	1,559	1,519
Los Angeles, CA[f]	2,573	1,191	874	476	81	2,493	1,078	1,049
Birmingham, AL	123	791	513	376	93	273	744	726
Phoenix, AZ	531	819	610	423	62	976	822	796
Hartford, CT	323	800	543	424	94	754	820	803
Kansas City, KS	137	848	539	405	98	221	740	726
Newark, NJ	594	926	585	443	62	1,043	1,070	1,040
Oklahoma City, OK	220	711	531	369	43	484	737	723
Portland, OR	208	683	529	410	50	298	724	708
Seattle, WA	635	677	498	423	40	442	754	742
Milwaukee, WI	578	593	482	390	69	964	613	596
Average[g]	372	761	537	407	68	606	780	762
Other Metropolitan								
Alabama	250	675	450	371	87	619	692	685
Arizona	178	797	563	416	60	209	765	755
Connecticut	619	952	649	442	87	1,108	970	956
Kansas	218	571	436	380	88	291	574	567
New Jersey	2,219	823	532	446	61	3,325	1,009	985
Oklahoma	221	717	537	368	36	439	758	748
Oregon	236	640	469	401	27	194	724	715
Washington	659	632	497	409	50	637	668	655
Wisconsin	697	588	448	374	44	1,863	646	633
Average	589	711	509	401	60	965	756	744
Non-Metropolitan								
Alabama	140	676	407	358	89	123	702	687
Arizona	208	798	540	399	67	175	818	796
Connecticut	59	761	610	406	92	38	722	721
Kansas	505	621	440	355	90	180	591	578
Oklahoma	347	661	493	344	56	138	729	712
Oregon	330	640	490	394	32	60	666	659
Washington	341	617	486	400	35	36	623	613
Wisconsin	564	559	427	358	38	146	613	598
Average	312	667	487	377	62	112	683	671

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S8-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: REPAIR INGUINAL HERNIA (CPT-4 49505), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	73%	69%	34%	46%	32%	10th	1st
NYC Suburbs-L.I., NY	61	54	39	63	34	5	1
Los Angeles, CA	73	83	40	54	45	25	15
Birmingham, AL	65	71	48	73	52	5	5
Phoenix, AZ	74	77	52	69	53	20	15
Hartford, CT	68	68	53	78	53	5	5
Kansas City, KS	64	74	48	75	56	15	10
Newark, NJ	63	56	48	76	43	10	5
Oklahoma City, OK	75	73	52	69	51	15	10
Portland, OR	77	75	60	78	58	10	10
Seattle, WA	74	67	62	85	57	10	10
Milwaukee, WI	81	81	66	81	65	15	10
Average[b]	71	71	54	76	54	12	9
Other Metropolitan							
Alabama	67	66	55	82	54	10	5
Arizona	71	75	52	74	55	20	15
Connecticut	68	68	46	68	46	5	5
Kansas	76	77	67	87	67	15	15
New Jersey	65	54	54	84	45	10	5
Oklahoma	75	72	51	69	49	10	5
Oregon	73	66	63	86	56	10	5
Washington	79	76	65	82	62	20	15
Wisconsin	76	71	64	83	59	15	10
Average	72	69	57	79	55	13	9
Non-Metropolitan							
Alabama	60	59	53	88	52	10	5
Arizona	68	68	50	74	50	15	10
Connecticut	80	85	53	67	56	20	10
Kansas	71	76	57	81	61	10	10
Oklahoma	75	69	52	70	48	15	10
Oregon	77	74	62	80	60	10	10
Washington	79	79	65	82	65	10	5
Wisconsin	76	71	64	84	60	15	15
Average	73	73	57	78	57	13	9

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S9-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: PROSTATECTOMY (CPT-4 52601), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	2,529	$2,549	$1,612	$1,204	67%	343	$2,395	$2,353
NYC Suburbs-L.I., NY[f]	6,556	2,332	1,502	1,197	62	1,118	2,300	2,266
Los Angeles, CA[f]	5,543	2,355	1,697	1,140	84	1,138	2,221	2,201
Birmingham, AL	271	1,329	1,081	927	87	162	1,314	1,298
Phoenix, AZ	1,007	1,658	1,210	1,018	54	373	1,611	1,606
Hartford, CT	651	1,565	1,194	1,033	83	366	1,570	1,551
Kansas City, KS	290	1,451	1,188	976	97	94	1,300	1,295
Newark, NJ	1,695	1,773	1,202	1,074	42	453	1,911	1,885
Oklahoma City, OK	771	1,293	962	925	43	302	1,312	1,291
Portland, OR	576	1,350	1,097	1,001	36	185	1,374	1,371
Seattle, WA	1,072	1,468	1,164	1,028	31	277	1,502	1,472
Milwaukee, WI	1,164	1,327	1,060	973	69	474	1,366	1,357
Average[g]	833	1,468	1,129	995	60	298	1,473	1,458
Other Metropolitan								
Alabama	539	1,354	948	915	85	336	1,305	1,303
Arizona	464	1,488	1,113	998	39	137	1,520	1,517
Connecticut	1,021	1,585	1,251	1,063	80	339	1,681	1,666
Kansas	733	1,254	962	941	94	155	1,259	1,237
New Jersey	4,418	1,596	1,156	1,075	51	1,439	1,764	1,749
Oklahoma	705	1,274	1,053	922	42	232	1,305	1,296
Oregon	483	1,236	961	978	25	147	1,375	1,366
Washington	1,490	1,372	1,144	993	46	383	1,340	1,336
Wisconsin	1,812	1,382	1,080	933	36	742	1,427	1,420
Average	1,296	1,393	1,074	980	55	434	1,442	1,432
Non-Metropolitan								
Alabama	229	1,243	946	882	87	33	1,124	1,122
Arizona	426	1,549	1,182	957	56	98	1,515	1,511
Connecticut	135	1,360	1,107	993	97	13	1,354	1,354
Kansas	803	1,219	960	878	80	96	1,208	1,202
Oklahoma	751	1,386	963	866	70	101	1,274	1,274
Oregon	837	1,313	995	963	26	58	1,390	1,387
Washington	439	1,397	1,195	972	18	14	1,461	1,461
Wisconsin	936	1,282	953	893	42	68	1,370	1,369
Average	570	1,344	1,038	926	60	60	1,337	1,335

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S9-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: PROSTATECTOMY (CPT-4 52601), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	63%	69%	47%	75%	51%	10th	5th
NYC Suburbs-L.I., NY	64	66	51	80	53	5	5
Los Angeles, CA	72	77	48	67	52	10	5
Birmingham, AL	81	83	70	86	71	10	5
Phoenix, AZ	73	75	61	84	63	10	5
Hartford, CT	76	77	66	87	67	10	5
Kansas City, KS	82	92	67	82	75	15	10
Newark, NJ	68	64	61	89	57	5	5
Oklahoma City, OK	74	75	72	96	72	5	5
Portland, OR	81	80	74	91	73	5	5
Seattle, WA	79	79	70	88	70	10	10
Milwaukee, WI	80	78	73	92	72	5	5
Average[b]	77	78	68	88	69	8	6
Other Metropolitan							
Alabama	70	73	68	97	70	5	5
Arizona	75	73	67	90	66	5	5
Connecticut	79	75	67	85	64	5	5
Kansas	77	78	75	98	76	10	10
New Jersey	72	66	67	93	61	5	5
Oklahoma	83	81	72	88	71	10	10
Oregon	78	70	79	102	72	<0	<0
Washington	83	86	72	87	74	20	10
Wisconsin	78	76	68	86	66	5	5
Average	77	75	71	92	69	7	6
Non-Metropolitan							
Alabama	76	84	71	93	79	15	10
Arizona	76	78	62	81	63	5	0
Connecticut	81	82	73	90	73	<0	<0
Kansas	79	80	72	91	73	5	5
Oklahoma	69	76	62	90	68	10	5
Oregon	76	72	73	97	69	<0	<0
Washington	86	82	70	81	67	<0	<0
Wisconsin	74	70	70	94	65	5	0
Average	77	78	69	90	70	5	3

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S10-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: TOTAL HYSTERECTOMY (CPT-4 58150), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	330	$4,071	$1,866	$996	47%	611	$4,166	$4,067
NYC Suburbs-L.I., NY[f]	758	3,926	1,584	996	54	1,822	3,759	3,681
Los Angeles, CA[f]	779	2,314	1,478	921	80	2,854	2,053	1,969
Birmingham, AL	50	1,445	965	730	98	686	1,368	1,348
Phoenix, AZ	128	1,826	1,085	822	52	1,234	1,745	1,701
Hartford, CT	89	1,808	1,028	820	97	611	1,954	1,927
Kansas City, KS	69	1,641	919	787	94	370	1,512	1,494
Newark, NJ	167	2,310	1,191	858	44	705	2,555	2,497
Oklahoma City, OK	106	1,433	912	712	51	721	1,320	1,284
Portland, OR	65	1,344	947	793	52	383	1,525	1,493
Seattle, WA	154	1,397	982	819	51	566	1,495	1,483
Milwaukee, WI	163	1,314	926	754	85	719	1,300	1,287
Average[g]	110	1,613	995	788	69	666	1,642	1,613
Other Metropolitan								
Alabama	67	1,297	935	718	81	1,270	1,315	1,298
Arizona	56	1,739	1,045	807	38	180	1,658	1,626
Connecticut	136	2,290	1,245	854	79	756	2,234	2,201
Kansas	105	1,255	891	737	96	441	1,327	1,323
New Jersey	435	2,027	1,071	866	55	2,512	2,360	2,310
Oklahoma	86	1,479	892	709	66	622	1,378	1,358
Oregon	44	1,275	846	776	55	324	1,441	1,434
Washington	194	1,347	962	792	59	795	1,424	1,417
Wisconsin	198	1,122	816	723	44	1,661	1,284	1,275
Average	147	1,537	967	776	64	951	1,602	1,582
Non-Metropolitan								
Alabama	25	1,322	985	696	100	145	1,353	1,330
Arizona	38	1,752	1,021	776	66	181	1,643	1,614
Connecticut	18	1,683	1,182	786	78	27	1,843	1,841
Kansas	163	1,253	919	689	91	278	1,134	1,124
Oklahoma	79	1,251	787	667	63	258	1,231	1,205
Oregon	92	1,258	864	765	45	113	1,381	1,375
Washington	91	997	735	777	43	48	1,390	1,382
Wisconsin	106	1,052	758	694	50	132	1,229	1,224
Average	77	1,321	906	731	67	148	1,401	1,387

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S10-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: TOTAL HYSTERECTOMY (CPT-4 58150), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	46%	46%	24%	53%	24%	5th	<0
NYC Suburbs-L.I., NY	40	43	25	63	27	5	1
Los Angeles, CA	64	75	40	62	47	25	20
Birmingham, AL	67	72	51	76	54	15	10
Phoenix, AZ	59	64	45	76	48	25	20
Hartford, CT	57	53	45	80	43	5	5
Kansas City, KS	56	62	48	86	53	15	10
Newark, NJ	52	48	37	72	34	5	1
Oklahoma City, OK	64	71	50	78	55	15	10
Portland, OR	70	63	59	84	53	15	15
Seattle, WA	70	66	59	83	55	20	15
Milwaukee, WI	70	72	57	81	59	15	10
Average[b]	63	63	50	80	50	14	11
Other Metropolitan							
Alabama	72	72	55	77	55	15	10
Arizona	60	64	46	77	50	15	15
Connecticut	54	57	37	69	39	10	5
Kansas	71	67	59	83	56	15	10
New Jersey	53	46	43	81	37	5	5
Oklahoma	60	66	48	79	52	10	5
Oregon	66	59	61	92	54	5	5
Washington	71	68	59	82	56	15	15
Wisconsin	73	64	64	89	57	10	10
Average	64	63	52	81	51	11	9
Non-Metropolitan							
Alabama	75	74	53	71	52	10	5
Arizona	58	63	44	76	48	10	5
Connecticut	70	64	47	66	43	<0	<0
Kansas	73	82	55	75	61	20	15
Oklahoma	63	65	53	85	55	15	15
Oregon	69	63	61	89	56	5	5
Washington	74	53	78	106	56	5	5
Wisconsin	72	62	66	92	57	15	15
Average	69	66	57	83	54	10	8

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

commercial insurer allowed and mean physician charge, or about the 5th percentile of the commercial charge distribution.

MFS amounts for all these procedures, in particular hysterectomy, are especially low in the New York City area. In Manhattan, the MFS hysterectomy fee is below the lowest commercial insurer (HIAA PHCS) charge and only one-quarter (24 percent) of the mean private charge. Given the current 47 percent and 55 percent Medicare assignment rates for hysterectomy and hernia repair, respectively, and lower Medicare market share for these procedures than some others, access in Manhattan could be a concern. Similarly low relative MFS amounts in New York City suburbs/Long Island, and New Jersey create concern for access there as well.

Payments for cataract surgery (CPT-4 66984) will be reduced by the MFS in most areas, but in no area will they fall below 50 percent of the mean commercial insurer allowed (Tables S11-A and S11-B). Western areas, including Los Angeles, Arizona, and Oregon, will see the largest percentage reductions in their average cataract fees. Conversely, cataract fees will increase in New Jersey and other metropolitan Alabama (e.g., Mobile). MFS amounts are between 54 percent and 73 percent of mean private fees in all areas, compared to 55 percent to 88 percent for 1988 Medicare alloweds.

Unfortunately, MFS amounts for heart catheter and angiogram (CPT-4 93547) were not available for this report. However, 1988 Medicare alloweds and commercial fees can still be compared. Medicare paid from 62 percent to 85 percent as much as commercial insurers across areas. Among metropolitan areas, Milwaukee had the lowest fees, a mean Medicare allowed charge of only $501 versus a mean commercial allowed of $803. The highest average Medicare fees were in Phoenix, Arizona, at $1,069, over twice as high as Milwaukee, but 17 percent less than the mean commercial fee of $1,292. Medicare generally paid at the 10th percentile or below of the private charge distribution.

10.3.2 Medical Services

In 1988, Medicare paid more in several areas for a comprehensive office visit with a new patient than the estimated mean commercial insurer fee

TABLE S11-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: REMOVE CATARACT, INSERT LENS (CPT-4 66984), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	11,120	$3,093	$1,890	$1,564	79%	1,082	$2,933	$2,880
NYC Suburbs-L.I., NY[f]	20,638	2,845	1,913	1,551	83	2,918	2,654	2,633
Los Angeles, CA[f]	25,915	2,757	1,926	1,489	96	3,541	2,474	2,442
Birmingham, AL	1,252	1,853	1,467	1,205	88	438	1,902	1,891
Phoenix, AZ	6,802	2,387	1,795	1,320	89	2,196	2,203	2,180
Hartford, CT	2,809	2,020	1,417	1,352	77	1,325	2,009	1,980
Kansas City, KS	1,522	2,023	1,549	1,264	96	292	1,972	1,970
Newark, NJ	6,524	1,781	1,234	1,401	78	950	2,275	2,242
Oklahoma City, OK	3,987	1,911	1,462	1,217	92	1,113	1,870	1,862
Portland, OR	1,981	2,050	1,650	1,308	90	434	1,965	1,944
Seattle, WA	4,692	1,960	1,449	1,340	73	814	1,878	1,855
Milwaukee, WI	3,597	1,862	1,362	1,278	80	1,102	1,827	1,805
Average[g]	3,685	1,983	1,487	1,298	85	963	1,989	1,970
Other Metropolitan								
Alabama	4,463	1,501	1,051	1,188	89	1,251	1,812	1,800
Arizona	3,095	2,482	1,793	1,292	98	523	2,273	2,245
Connecticut	4,192	2,114	1,534	1,389	75	1,128	2,187	2,175
Kansas	3,300	1,803	1,352	1,234	100	463	1,730	1,726
New Jersey	17,027	1,673	1,213	1,403	65	3,619	2,146	2,119
Oklahoma	4,623	1,724	1,349	1,211	88	940	1,682	1,672
Oregon	2,641	2,175	1,614	1,277	80	411	2,181	2,175
Washington	5,230	1,945	1,479	1,286	81	1,070	1,764	1,756
Wisconsin	6,745	1,764	1,335	1,220	70	1,927	1,772	1,767
Average	5,702	1,909	1,413	1,278	83	1,259	1,950	1,937
Non-Metropolitan								
Alabama	622	1,725	1,434	1,139	73	75	1,813	1,805
Arizona	1,037	2,387	1,791	1,232	100	186	2,225	2,189
Connecticut	405	1,989	1,484	1,297	59	42	1,955	1,912
Kansas	2,916	1,547	1,333	1,140	95	166	1,533	1,522
Oklahoma	2,898	1,734	1,335	1,129	91	180	1,710	1,687
Oregon	1,786	2,095	1,590	1,255	79	86	1,972	1,966
Washington	3,320	1,813	1,396	1,262	87	36	1,886	1,886
Wisconsin	1,698	1,607	1,310	1,164	54	166	1,616	1,605
Average	1,835	1,862	1,459	1,202	80	117	1,839	1,822

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S11-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: REMOVE CATARACT, INSERT LENS (CPT-4 66984), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	61%	66%	51%	83%	54%	15th	10th
NYC Suburbs-L.I., NY	67	73	55	81	59	15	5
Los Angeles, CA	70	79	54	77	61	15	10
Birmingham, AL	79	78	65	82	64	5	1
Phoenix, AZ	75	82	55	74	61	15	10
Hartford, CT	70	72	67	95	68	5	5
Kansas City, KS	77	79	62	82	64	10	5
Newark, NJ	69	55	79	114	62	5	5
Oklahoma City, OK	77	79	64	83	65	10	5
Portland, OR	80	85	64	79	67	10	5
Seattle, WA	74	78	68	92	72	10	10
Milwaukee, WI	73	75	69	94	71	5	5
Average[b]	75	76	66	88	66	8	6
Other Metropolitan							
Alabama	70	58	79	113	66	5	5
Arizona	72	80	52	72	58	10	5
Connecticut	73	71	66	91	64	5	5
Kansas	75	78	68	91	71	10	5
New Jersey	73	57	84	116	66	5	5
Oklahoma	78	81	70	90	72	10	10
Oregon	74	74	59	79	59	5	5
Washington	76	84	66	87	73	20	10
Wisconsin	76	76	69	91	69	5	5
Average	74	73	68	92	66	8	6
Non-Metropolitan							
Alabama	83	79	66	79	63	10	5
Arizona	75	82	52	69	56	5	1
Connecticut	75	78	65	87	68	5	<0
Kansas	86	88	74	86	75	15	5
Oklahoma	77	79	65	85	67	5	5
Oregon	76	81	60	79	64	0	<0
Washington	77	74	70	90	67	5	5
Wisconsin	82	82	72	89	73	5	1
Average	79	80	66	83	67	6	3

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S12-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: HEART CATHETER AND ANGIOGRAM (CPT-4 93547), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	1,656	$1,335	$1,048	.	88%	489	$1,438	$1,408
NYC Suburbs-L.I., NY[f]	2,540	1,208	850	.	77	719	1,394	1,381
Los Angeles, CA[f]	6,466	1,234	931	.	89	3,389	1,134	1,117
Birmingham, AL	848	807	681	.	74	882	827	821
Phoenix, AZ	1,483	1,280	1,069	.	71	683	1,305	1,292
Hartford, CT	541	784	584	.	97	564	868	863
Kansas City, KS	470	921	767	.	100	285	929	927
Newark, NJ	1,324	915	730	.	52	739	1,101	1,088
Oklahoma City, OK	1,730	814	572	.	65	1,117	862	851
Portland, OR	857	655	573	.	43	345	671	660
Seattle, WA	1,900	660	565	.	26	583	716	711
Milwaukee, WI	604	713	501	.	73	486	814	803
Average[g]	1,084	839	671	.	67	632	899	891
Other Metropolitan								
Alabama	1,006	857	648	.	100	965	836	832
Arizona	508	1,238	945	.	100	235	1,227	1,225
Connecticut	1,027	1,021	752	.	74	824	1,138	1,128
Kansas	752	717	617	.	77	218	727	723
New Jersey	3,089	1,163	840	.	60	2,196	1,202	1,185
Oklahoma	1,147	824	537	.	47	727	814	809
Oregon	673	676	538	.	42	185	707	704
Washington	1,780	716	589	.	72	532	764	761
Wisconsin	949	711	520	.	42	888	800	796
Average	1,215	880	665	.	68	752	913	907
Non-Metropolitan								
Alabama	141	735	664	.	100	119	855	854
Arizona	58	1,217	888	.	95	18	1,264	1,254
Connecticut	.	.	.	.	.	2	763	762
Kansas	.	.	.	.	.	5	801	801
Oklahoma	177	760	560	.	66	25	877	877
Oregon	183	723	494	.	33	24	672	667
Washington	140	765	628	.	19	13	794	793
Wisconsin	344	606	506	.	50	8	764	764
Average	174	801	623	.	61	27	849	847

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S12-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: HEART CATHETER AND ANGIOGRAM (CPT-4 93547), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	79%	74%	.	.	.	10th	.
NYC Suburbs-L.I., NY	70	62	.	.	.	5	.
Los Angeles, CA	75	83	.	.	.	20	.
Birmingham, AL	84	83	.	.	.	5	.
Phoenix, AZ	84	83	.	.	.	10	.
Hartford, CT	74	68	.	.	.	1	.
Kansas City, KS	83	83	.	.	.	5	.
Newark, NJ	80	67	.	.	.	1	.
Oklahoma City, OK	70	67	.	.	.	5	.
Portland, OR	87	87	.	.	.	10	.
Seattle, WA	86	79	.	.	.	10	.
Milwaukee, WI	70	62	.	.	.	1	.
Average[b]	69	62	.	.	.	7	.
Other Metropolitan							
Alabama	76	78	.	.	.	5	.
Arizona	76	77	.	.	.	5	.
Connecticut	74	67	.	.	.	5	.
Kansas	86	85	.	.	.	<0	.
New Jersey	72	71	.	.	.	5	.
Oklahoma	65	66	.	.	.	1	.
Oregon	80	76	.	.	.	5	.
Washington	82	77	.	.	.	1	.
Wisconsin	73	65	.	.	.	5	.
Average	76	74	.	.	.	4	.
Non-Metropolitan							
Alabama	90	78	.	.	.	5	.
Arizona	73	71	.	.	.	< 0	.
Connecticut	.	.	.	.	.	.	.
Kansas	.	.	.	.	.	.	.
Oklahoma	74	64	.	.	.	< 0	.
Oregon	68	74	.	.	.	< 0	.
Washington	82	79	.	.	.	< 0	.
Wisconsin	83	66	.	.	.	< 0	.
Average	78	72	.	.	.	1	.

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

(Tables S13-A and S13-B). The mean Medicare allowed charge in nonmetropolitan Wisconsin was $73 compared to the average private fee of $52, in rural Oregon, the Medicare fee was $70 compared to a private fee of $68 and in rural Kansas, the fees were $51 and $49, respectively. Under the MFS, fees in rural Wisconsin and Oregon will fall to $57 and $60, respectively, even though 1988 assignment rates were only 37 percent and 31 percent, respectively. In rural Wisconsin and Oregon, the 1988 mean Medicare submitted charge for this visit exceeded the mean commercial submitted charge by wide margins. In rural Kansas, the MFS will raise the fee from $51 to $56 in spite of a 91 percent assignment rate.

Several Western areas, which tend to have high visit fees, will also experience significant payment declines. In Los Angeles, the fee will drop from $93 to $70, and in Phoenix from $76 to $63. In Los Angeles, the MFS amount is only 54 percent of the mean commercial fee, or at the 10th percentile of the private charge distribution. However, the 1988 assignment rate in Los Angeles was a high 86 percent.

In many areas the Medicare fee for this visit will increase, including NYC suburbs/Long Island. It will rise there from $54 to $72, bringing the area into virtual parity with Manhattan. In Manhattan, where most fees will fall substantially, the payment for this visit will be reduced only slightly, from $74 to $72. Under the MFS, payment will equal or exceed the mean commercial insurer fee in nonmetropolitan Alabama, Kansas, and Wisconsin. On average, this new patient visit will be paid quite well in rural areas--the MFS amount averages 93 percent of the private fee and the 53rd percentile of the private charge distribution in nonmetropolitan areas versus 79 percent of the fee and the 36th percentile in metropolitan areas.

Almost all areas will see higher fees for a <u>limited office visit with an established patient</u> under the MFS. Nonmetropolitan areas will experience especially large fee increases. With the exception of rural Connecticut, where the fee will actually fall slightly, and rural Arizona with an 11 percent increase, all other rural areas will see at least a 20 percent increase. In rural areas, the Medicare fee will average about the same as the

TABLE S13-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: OFFICE VISIT NEW, COMPREHENSIVE, (CPT-4 90020), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	61,210	$122.90	$74.22	$72.36	69%	13,049	$127.06	$121.32
NYC Suburbs-L.I., NY[f]	149,881	87.78	53.57	72.06	70	24,540	85.58	81.24
Los Angeles, CA[f]	126,169	125.26	92.57	69.57	86	26,612	135.37	129.63
Birmingham, AL	4,530	92.88	65.91	58.64	86	2,030	83.46	82.01
Phoenix, AZ	20,690	105.21	76.42	63.05	52	4,766	89.52	85.38
Hartford, CT	6,808	77.62	59.96	63.90	88	2,192	75.14	72.97
Kansas City, KS	3,744	106.88	50.18	60.74	89	1,429	65.75	63.04
Newark, NJ	16,463	73.54	53.70	66.40	47	5,021	72.26	68.28
Oklahoma City, OK	9,114	86.58	65.08	58.44	41	1,898	84.67	82.14
Portland, OR	3,921	96.41	77.92	62.18	57	812	94.39	93.00
Seattle, WA	6,939	97.32	68.87	63.82	36	1,141	102.08	99.06
Milwaukee, WI	7,362	75.19	57.23	61.25	65	5,737	76.85	74.48
Average[g]	8,841	90.18	63.92	62.05	62	2,781	82.68	80.04
Other Metropolitan								
Alabama	7,274	80.56	57.90	58.01	72	3,707	74.06	72.55
Arizona	4,795	86.85	73.23	61.86	77	547	84.02	82.51
Connecticut	14,772	82.84	62.95	64.91	83	3,961	80.17	77.57
Kansas	3,965	75.70	57.04	59.36	89	652	65.72	63.87
New Jersey	55,495	71.39	52.64	66.01	51	17,484	73.61	70.54
Oklahoma	7,850	91.29	67.55	58.67	47	1,813	87.44	85.59
Oregon	2,790	97.47	75.16	60.77	35	327	100.76	98.82
Washington	7,422	89.42	70.51	62.30	46	958	90.91	89.57
Wisconsin	4,709	83.12	61.78	59.49	52	9,436	72.78	70.57
Average	12,119	84.29	64.31	61.26	61	4,321	81.05	79.07
Non-Metropolitan								
Alabama	2,131	60.84	42.82	56.45	87	442	58.06	56.46
Arizona	3,216	80.67	63.14	59.94	57	202	75.41	74.06
Connecticut	993	66.52	52.80	61.69	76	140	71.14	69.34
Kansas	1,839	62.74	50.89	55.78	91	182	50.51	49.40
Oklahoma	5,780	64.09	47.56	55.64	69	483	63.07	60.49
Oregon	1,705	85.37	70.25	60.14	31	86	69.51	67.65
Washington	1,378	88.97	72.21	60.69	45	27	85.26	84.96
Wisconsin	2,188	93.71	73.24	56.77	37	220	55.19	52.10
Average	2,404	75.36	59.11	58.39	62	223	66.02	64.31

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S13-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: OFFICE VISIT NEW, COMPREHENSIVE (CPT-4 90020), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	60%	61%	59%	97%	60%	20th	20th
NYC Suburbs-L.I., NY	61	66	82	135	89	25	45
Los Angeles, CA	74	71	56	75	54	25	10
Birmingham, AL	71	80	63	89	72	40	35
Phoenix, AZ	73	90	60	83	74	45	35
Hartford, CT	77	82	82	107	88	35	40
Kansas City, KS	47	80	57	121	96	35	50
Newark, NJ	73	79	90	124	97	40	55
Oklahoma City, OK	75	79	67	90	71	45	40
Portland, OR	81	84	64	80	67	30	20
Seattle, WA	71	70	66	93	64	20	15
Milwaukee, WI	76	77	81	107	82	40	45
Average[b]	72	80	70	99	79	37	37
Other Metropolitan							
Alabama	72	80	72	100	80	35	35
Arizona	84	89	71	84	75	45	35
Connecticut	76	81	78	103	84	35	40
Kansas	75	89	78	104	93	45	50
New Jersey	74	75	92	125	94	35	50
Oklahoma	74	79	64	87	69	40	35
Oregon	77	76	62	81	61	20	15
Washington	79	79	70	88	70	25	20
Wisconsin	74	88	72	96	84	45	45
Average	76	82	73	96	79	36	36
Non-Metropolitan							
Alabama	70	76	93	132	100	45	60
Arizona	78	85	74	95	81	45	45
Connecticut	79	76	93	117	89	35	45
Kansas	81	103	89	110	113	65	65
Oklahoma	74	79	87	117	92	55	60
Oregon	82	104	70	86	89	60	50
Washington	81	85	68	84	71	35	30
Wisconsin	78	141	61	78	109	75	65
Average	78	94	79	102	93	52	53

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

commercial fee, a significant improvement from 77 percent as much in 1988 (Table S14-B).

Although fees will rise in all metropolitan areas except Manhattan and those in Connecticut, the Medicare fee will remain about 10 percent below the mean private fee, on average. In Manhattan the Medicare fee for this visit will fall from $60 to $42, or from 73 percent to 53 percent of the mean commercial insurer fee. The MFS amount is only at the 5th percentile of the private fee distribution in Manhattan.

Manhattan is the only area where the MFS will not increase fees for an intermediate office visit with an established patient (Tables S15-A and S15-B). In the eight nonmetropolitan areas, on average, the MFS amount exceeds mean physician charges, the mean private fee, and the 50th percentile of the private charge distribution. The MFS is not quite as generous in urban areas, but it pays relatively quite well there too, except in Manhattan and Los Angeles. In the latter two areas, the MFS amount is only at the 10th percentile of the private charge distribution. The pattern is very similar for an extended office visit with an established patient (Tables S16-A and S16-B).

Los Angeles had by far the highest Medicare fee for comprehensive initial hospital care in 1988 at $111, $35 higher than the fee in Manhattan (Table S17-A). It is the only area that will experience a fee reduction under the MFS. But the reduction is only three percent, and the 1988 Los Angeles assignment rate was 90 percent. Atypically, the Medicare fee in Manhattan will increase by 47 percent, from $76 to $112, from 50 percent to 73 percent as much as the mean private fee. The fee in NYC suburbs/Long Island will nearly double, from $56 to $111, improving from the 10th to the 30th percentile of the private charge distribution.

Limited subsequent hospital care (Tables S18-A and S18-B) is a more typical visit in that Manhattan will experience a large reduction along with smaller reductions for Los Angeles and Phoenix. The MFS will increase fees in all other areas, sometimes above what physicians currently charge. Rural areas will fare especially well; in rural Alabama and Arizona, MFS amounts exceed mean private alloweds. The commercial insurer (HIAA PHCS) fees in

TABLE S14-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: OFFICE VISIT, ESTABLISHED, LIMITED (CPT-4 90050), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	558,191	$60.14	$42.33	$30.48	69%	14,500	$60.26	$58.04
NYC Suburbs-L.I., NY[f]	1,465,322	43.74	29.89	30.34	60	47,345	43.19	41.49
Los Angeles, CA[f]	852,463	37.26	29.42	29.53	79	99,204	38.99	37.44
Birmingham, AL	42,728	28.55	21.47	25.23	87	14,216	29.19	28.34
Phoenix, AZ	208,484	31.36	26.26	26.88	53	34,430	31.70	31.03
Hartford, CT	94,152	33.83	28.90	27.29	86	13,350	35.60	34.23
Kansas City, KS	83,654	26.32	18.08	25.94	77	18,347	27.07	26.44
Newark, NJ	244,437	32.01	23.94	28.34	34	23,702	36.14	34.52
Oklahoma City, OK	124,811	26.24	21.18	25.20	39	16,898	27.63	26.79
Portland, OR	140,105	27.24	21.81	26.60	44	24,155	29.55	29.04
Seattle, WA	249,907	28.17	21.62	27.28	41	35,846	32.01	31.27
Milwaukee, WI	219,223	26.20	22.21	26.36	64	69,480	28.75	27.43
Average[g]	156,389	28.88	22.83	26.57	58	27,825	30.85	29.90
Other Metropolitan								
Alabama	86,346	26.09	18.81	24.96	71	33,832	27.17	26.45
Arizona	105,144	30.14	25.74	26.38	65	8,027	30.70	29.86
Connecticut	183,239	36.25	30.29	28.10	78	16,168	36.96	35.98
Kansas	183,901	24.96	17.45	25.41	80	24,791	25.06	24.38
New Jersey	875,822	29.18	21.80	28.10	32	77,414	33.58	32.55
Oklahoma	130,625	26.49	21.05	25.32	51	18,533	28.16	27.49
Oregon	146,188	26.00	21.39	26.00	34	14,458	30.25	29.56
Washington	284,892	27.49	21.61	26.62	40	48,999	29.96	29.48
Wisconsin	250,074	25.03	19.53	25.54	46	252,181	27.45	26.32
Average	249,581	27.96	21.96	26.27	55	54,934	29.92	29.12
Non-Metropolitan								
Alabama	39,619	24.81	16.85	24.36	80	3,519	25.16	24.62
Arizona	78,965	28.09	23.09	25.62	69	5,375	28.38	27.56
Connecticut	18,467	30.99	27.09	26.39	78	1,136	32.63	31.80
Kansas	415,952	21.65	17.16	24.04	80	15,400	22.82	22.38
Oklahoma	195,947	22.52	19.38	24.11	54	4,963	24.15	23.61
Oregon	194,387	25.44	21.54	25.76	36	5,955	26.92	26.49
Washington	179,835	26.43	20.52	25.97	33	3,220	27.91	27.43
Wisconsin	213,286	21.95	18.20	24.50	46	23,926	24.01	22.95
Average	167,057	25.24	20.48	25.09	60	7,937	26.50	25.86

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S14-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: OFFICE VISIT, ESTAB., LIMITED (CPT-4 90050), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	70%	73%	51%	72%	53%	20th	5th
NYC Suburbs-L.I., NY	68	72	69	102	73	10	10
Los Angeles, CA	79	79	79	100	79	10	10
Birmingham, AL	75	76	88	118	89	5	20
Phoenix, AZ	84	85	86	102	87	20	20
Hartford, CT	85	84	81	94	80	20	15
Kansas City, KS	69	68	99	143	98	5	30
Newark, NJ	75	69	89	118	82	10	25
Oklahoma City, OK	81	79	96	119	94	20	30
Portland, OR	80	75	98	122	92	5	25
Seattle, WA	77	69	97	126	87	5	15
Milwaukee, WI	85	81	101	119	96	15	40
Average[b]	79	76	93	118	89	12	24
Other Metropolitan							
Alabama	72	71	96	133	94	5	30
Arizona	85	86	88	102	88	10	25
Connecticut	84	84	78	93	78	20	15
Kansas	70	72	102	146	104	5	65
New Jersey	75	67	96	129	86	10	25
Oklahoma	79	77	96	120	92	15	40
Oregon	82	72	100	122	88	5	20
Washington	79	73	97	123	90	5	20
Wisconsin	78	74	102	131	97	10	45
Average	78	75	95	122	91	9	32
Non-Metropolitan							
Alabama	68	68	98	145	99	10	35
Arizona	82	84	91	111	93	10	30
Connecticut	87	85	85	97	83	15	15
Kansas	79	77	111	140	107	5	65
Oklahoma	86	82	107	124	102	20	60
Oregon	85	81	101	120	97	10	50
Washington	78	75	98	127	95	5	30
Wisconsin	83	79	112	135	107	10	65
Average	81	79	100	125	98	11	44

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S15-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: OFFICE VISIT, ESTABLISHED, INTER. (CPT-4 90060), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	485,402	$62.41	$43.21	$37.17	70%	31,643	$63.02	$60.50
NYC Suburbs-L.I., NY[f]	1,357,790	44.58	30.46	37.01	62	94,524	44.08	42.19
Los Angeles, CA[f]	1,918,525	44.88	35.56	36.03	84	146,992	48.26	46.19
Birmingham, AL	67,635	33.23	27.10	30.81	81	17,119	31.17	30.64
Phoenix, AZ	224,700	36.76	30.95	32.81	60	32,348	37.12	36.06
Hartford, CT	124,380	35.90	28.74	33.31	85	16,965	37.92	36.98
Kansas City, KS	33,603	32.36	25.34	31.67	78	10,365	31.16	30.72
Newark, NJ	236,366	34.58	27.53	34.58	42	28,464	37.12	35.69
Oklahoma City, OK	53,940	30.74	25.22	30.77	45	8,136	31.65	30.61
Portland, OR	56,841	34.43	28.55	32.47	49	8,550	36.69	35.81
Seattle, WA	208,109	35.37	25.78	33.29	46	17,808	39.73	38.71
Milwaukee, WI	91,916	31.13	24.45	32.19	71	33,789	33.86	32.69
Average[g]	121,943	33.83	27.07	32.43	62	19,283	35.16	34.21
Other Metropolitan								
Alabama	105,144	29.35	23.47	30.44	76	30,109	29.82	29.05
Arizona	75,171	32.76	27.54	32.20	65	4,400	34.84	34.19
Connecticut	191,949	36.45	29.89	33.89	78	26,162	38.68	37.51
Kansas	49,970	34.50	26.12	31.02	87	5,820	30.79	30.27
New Jersey	703,870	31.87	24.90	34.26	41	100,374	35.76	34.57
Oklahoma	59,977	31.20	25.05	30.93	48	9,345	31.53	30.64
Oregon	62,108	32.99	27.83	31.73	36	5,183	36.49	35.83
Washington	251,036	32.89	25.87	32.42	54	20,006	36.03	35.44
Wisconsin	72,546	31.85	22.53	31.21	55	84,479	33.83	32.81
Average	174,641	32.65	25.91	32.01	60	31,764	34.20	33.37
Non-Metropolitan								
Alabama	91,688	26.62	21.42	29.76	85	5,721	28.03	27.58
Arizona	57,576	32.75	25.92	31.29	59	2,230	31.83	30.95
Connecticut	30,287	30.95	26.79	32.21	80	1,318	34.39	33.58
Kansas	55,073	29.26	23.62	29.36	83	2,187	26.81	26.38
Oklahoma	54,791	26.33	21.07	29.45	59	1,631	27.88	26.94
Oregon	62,528	33.09	27.84	31.44	43	1,193	31.58	31.07
Washington	74,102	32.47	25.26	31.70	41	990	33.61	33.26
Wisconsin	63,131	26.57	21.81	29.92	52	11,336	27.17	26.08
Average	61,147	29.76	24.22	30.64	63	3,326	30.16	29.48

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S15-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: OFFICE VISIT, ESTAB., INTER. (CPT-4 90060), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	69%	71%	60%	86%	61%	20th	10th
NYC Suburbs-L.I., NY	68	72	83	122	88	10	35
Los Angeles, CA	79	77	80	101	78	10	10
Birmingham, AL	82	88	93	114	101	30	55
Phoenix, AZ	84	86	89	106	91	15	30
Hartford, CT	80	78	93	116	90	10	30
Kansas City, KS	78	82	98	125	103	10	70
Newark, NJ	80	77	100	126	97	15	45
Oklahoma City, OK	82	82	100	122	101	20	50
Portland, OR	83	80	94	114	91	20	35
Seattle, WA	73	67	94	129	86	5	20
Milwaukee, WI	79	75	103	132	98	20	55
Average[b]	80	79	96	120	95	16	43
Other Metropolitan							
Alabama	80	81	104	130	105	15	60
Arizona	84	81	98	117	94	20	45
Connecticut	82	80	93	113	90	15	35
Kansas	76	86	90	119	102	30	55
New Jersey	78	72	107	138	99	10	55
Oklahoma	80	82	99	123	101	30	60
Oregon	84	78	96	114	89	10	25
Washington	79	73	99	125	91	5	30
Wisconsin	71	69	98	139	95	15	50
Average	79	78	98	124	96	17	46
Non-Metropolitan							
Alabama	80	78	112	139	108	20	60
Arizona	79	84	96	121	101	25	50
Connecticut	87	80	104	120	96	15	45
Kansas	81	90	100	124	111	40	65
Oklahoma	80	78	112	140	109	35	60
Oregon	84	90	95	113	101	35	55
Washington	78	76	98	125	95	10	35
Wisconsin	82	84	113	137	115	25	75
Average	81	83	104	127	105	26	56

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S16-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: OFFICE VISIT, ESTABLISHED, EXTENDED (CPT-4 90070), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	123,304	$70.64	$53.09	$49.64	63%	12,392	$76.86	$74.71
NYC Suburbs-L.I., NY[f]	342,074	52.44	41.08	49.44	58	19,108	57.05	54.96
Los Angeles, CA[f]	832,651	57.90	47.43	48.15	88	63,551	64.57	61.57
Birmingham, AL	8,806	45.54	33.50	41.31	90	3,422	43.42	42.61
Phoenix, AZ	50,584	46.58	36.79	43.93	61	8,948	45.43	43.77
Hartford, CT	31,324	41.20	31.48	44.56	84	3,844	47.01	45.86
Kansas City, KS	9,477	42.37	33.01	42.42	86	3,219	39.91	38.85
Newark, NJ	59,968	45.31	35.84	46.28	52	5,438	48.74	47.08
Oklahoma City, OK	12,759	42.05	32.60	41.21	44	1,677	46.32	45.16
Portland, OR	13,269	47.11	39.56	43.45	49	2,224	51.05	50.03
Seattle, WA	36,922	49.29	39.28	44.57	48	4,334	54.42	53.56
Milwaukee, WI	17,815	42.57	31.79	43.10	68	10,580	44.73	43.24
Average[g]	26,769	44.67	34.87	43.43	65	4,854	46.78	45.57
Other Metropolitan								
Alabama	11,488	35.36	25.23	40.77	76	4,357	38.33	37.64
Arizona	16,070	45.95	39.22	43.12	75	1,205	45.01	43.66
Connecticut	53,723	44.50	35.48	45.18	80	5,588	49.88	48.59
Kansas	9,139	48.07	37.41	41.51	80	1,035	46.45	45.62
New Jersey	215,448	41.59	33.18	45.92	46	22,356	46.04	44.34
Oklahoma	9,573	43.27	31.69	41.35	43	1,857	42.25	41.09
Oregon	9,408	44.05	37.38	42.47	36	1,211	48.70	47.88
Washington	42,644	45.53	37.14	43.61	58	4,973	50.97	49.99
Wisconsin	18,035	42.69	29.92	41.78	50	21,659	46.95	45.82
Average	42,836	43.45	34.07	42.86	60	7,138	46.06	44.96
Non-Metropolitan								
Alabama	10,250	31.93	23.10	39.96	94	952	35.05	34.16
Arizona	11,065	43.23	33.83	41.95	73	350	43.79	42.90
Connecticut	5,554	42.04	34.06	43.11	84	258	42.82	41.83
Kansas	10,839	39.15	31.93	39.38	77	422	39.73	39.33
Oklahoma	14,020	33.81	25.49	39.52	59	489	36.52	35.60
Oregon	11,015	46.90	38.92	42.11	51	347	43.92	43.17
Washington	13,163	45.20	39.03	42.47	36	207	48.02	47.59
Wisconsin	16,523	41.63	35.93	40.12	46	2,444	37.62	36.45
Average	11,554	40.49	32.79	41.08	65	684	40.93	40.13

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S16-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: OFFICE VISIT, ESTAB., EXTENDED (CPT-4 90070), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	75%	71%	70%	94%	66%	25th	15th
NYC Suburbs-L.I., NY	78	75	94	120	90	15	40
Los Angeles, CA	82	77	83	102	78	15	25
Birmingham, AL	74	79	91	123	97	25	45
Phoenix, AZ	79	84	94	119	100	35	55
Hartford, CT	76	69	108	142	97	10	45
Kansas City, KS	78	85	100	129	109	35	65
Newark, NJ	79	76	102	129	98	25	45
Oklahoma City, OK	78	72	98	126	91	30	40
Portland, OR	84	79	92	110	87	15	25
Seattle, WA	80	73	90	113	83	15	25
Milwaukee, WI	75	74	101	136	100	30	50
Average[b]	78	77	97	125	96	24	44
Other Metropolitan							
Alabama	71	67	115	162	108	10	55
Arizona	85	90	94	110	99	35	45
Connecticut	80	73	102	127	93	15	45
Kansas	78	82	86	111	91	25	35
New Jersey	80	75	110	138	104	20	60
Oklahoma	73	77	96	130	101	30	60
Oregon	85	78	96	114	89	15	35
Washington	82	74	96	117	87	15	30
Wisconsin	70	65	98	140	91	20	40
Average	78	76	99	128	96	21	45
Non-Metropolitan							
Alabama	72	68	125	173	117	10	70
Arizona	78	79	97	124	98	10	50
Connecticut	81	81	103	127	103	35	55
Kansas	82	81	101	123	100	30	55
Oklahoma	75	72	117	155	111	30	65
Oregon	83	90	90	108	98	35	40
Washington	86	82	94	109	89	25	25
Wisconsin	86	99	96	112	110	50	65
Average	80	82	103	129	103	28	53

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S17-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: INITIAL HOSPITAL CARE, COMPREHENSIVE (CPT-4 90220), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	43,762	$148.32	$75.80	$111.58	80%	1,994	$161.32	$152.94
NYC Suburbs-L.I., NY[f]	143,595	113.83	56.19	111.08	77	4,615	141.81	134.14
Los Angeles, CA[f]	173,903	173.34	111.16	108.07	90	10,478	183.43	175.97
Birmingham, AL	11,064	112.11	89.55	92.26	90	1,955	106.94	104.58
Phoenix, AZ	21,808	118.55	94.67	98.35	69	2,309	122.93	119.72
Hartford, CT	14,925	101.17	79.91	99.86	83	960	89.06	86.53
Kansas City, KS	9,594	108.00	78.19	94.89	86	784	103.70	101.71
Newark, NJ	32,379	113.95	80.73	103.67	72	1,790	126.55	120.12
Oklahoma City, OK	17,165	106.88	74.43	92.15	62	1,289	104.85	103.16
Portland, OR	8,729	103.64	80.91	97.30	62	466	105.63	102.75
Seattle, WA	14,498	113.32	74.81	99.78	49	727	129.17	125.91
Milwaukee, WI	27,840	101.47	77.81	96.41	70	4,485	107.48	105.35
Average[g]	17,556	108.79	81.22	97.19	71	1,641	110.70	107.76
Other Metropolitan								
Alabama	16,648	98.50	70.81	91.21	84	3,487	98.97	96.78
Arizona	9,106	108.97	80.53	96.50	76	602	109.23	107.32
Connecticut	24,779	106.34	82.78	102.19	72	1,142	102.79	99.17
Kansas	9,493	108.16	84.33	92.93	87	612	103.24	101.50
New Jersey	104,163	114.38	82.91	102.80	74	7,202	122.10	117.23
Oklahoma	14,816	112.93	80.31	92.58	61	1,080	112.54	111.16
Oregon	6,898	103.78	78.61	95.10	43	319	118.87	115.34
Washington	20,471	103.44	77.19	97.15	59	836	109.57	108.07
Wisconsin	27,863	96.91	78.16	93.23	51	10,221	102.91	100.75
Average	26,026	105.93	79.51	95.97	67	2,833	108.91	106.37
Non-Metropolitan								
Alabama	9,917	89.94	64.47	89.07	91	641	90.46	88.82
Arizona	8,374	109.92	90.90	93.72	74	308	114.94	110.95
Connecticut	3,540	94.40	79.47	96.53	68	71	100.04	99.34
Kansas	14,136	102.14	81.89	87.89	83	292	99.22	97.85
Oklahoma	17,842	84.39	62.79	88.13	61	351	92.57	90.79
Oregon	9,588	99.58	77.88	94.21	44	112	105.12	102.89
Washington	8,409	100.25	76.11	94.98	51	63	104.92	104.10
Wisconsin	19,725	86.36	70.32	89.57	48	971	91.82	90.06
Average	11,441	95.87	75.48	91.76	65	351	99.89	98.10

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S17-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: INITIAL HOSPITAL CARE, COMP. (CPT-4 90220), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	51%	50%	75%	147%	73%	15th	30th
NYC Suburbs-L.I., NY	49	42	98	198	83	10	30
Los Angeles, CA	64	63	62	97	61	10	10
Birmingham, AL	80	86	82	103	88	20	20
Phoenix, AZ	80	79	83	104	82	20	20
Hartford, CT	79	92	99	125	115	35	55
Kansas City, KS	72	77	88	121	93	15	25
Newark, NJ	71	67	91	128	86	20	40
Oklahoma City, OK	70	72	86	124	89	20	35
Portland, OR	78	79	94	120	95	25	35
Seattle, WA	66	59	88	133	79	5	20
Milwaukee, WI	77	74	95	124	92	5	30
Average[b]	75	76	90	120	91	18	31
Other Metropolitan							
Alabama	72	73	93	129	94	15	35
Arizona	74	75	89	120	90	15	30
Connecticut	78	83	96	123	103	35	55
Kansas	78	83	86	110	92	20	25
New Jersey	72	71	90	124	88	20	40
Oklahoma	71	72	82	115	83	20	30
Oregon	76	68	92	121	82	10	20
Washington	75	71	94	126	90	10	25
Wisconsin	81	78	96	119	93	15	30
Average	75	75	91	121	91	18	32
Non-Metropolitan							
Alabama	72	73	99	138	100	15	45
Arizona	83	82	85	103	84	15	20
Connecticut	84	80	102	121	97	25	40
Kansas	80	84	86	107	90	15	30
Oklahoma	74	69	104	140	97	10	50
Oregon	78	76	95	121	92	20	30
Washington	76	73	95	125	91	20	35
Wisconsin	81	78	104	127	99	10	50
Average	79	77	96	123	94	16	38

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S18-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: SUBSEQUENT HOSPITAL CARE, LIMITED (CPT-4 90250), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	400,558	$68.25	$53.57	$36.64	80%	3,840	$72.27	$71.32
NYC Suburbs-L.I., NY[f]	1,118,147	50.35	32.74	36.47	79	4,794	55.83	54.02
Los Angeles, CA[f]	415,345	48.57	38.31	35.51	87	9,329	54.54	52.52
Birmingham, AL	18,340	33.80	26.53	30.33	91	2,471	35.05	33.98
Phoenix, AZ	67,545	41.54	34.61	32.31	61	3,832	42.74	41.63
Hartford, CT	73,588	36.34	30.46	32.83	81	1,919	44.45	42.20
Kansas City, KS	73,507	32.95	21.21	31.18	86	3,400	35.40	34.74
Newark, NJ	187,913	40.90	31.79	34.07	68	2,765	47.00	45.45
Oklahoma City, OK	113,014	36.49	29.84	30.32	59	3,744	37.36	36.72
Portland, OR	53,851	32.11	25.34	31.99	59	2,887	34.13	33.11
Seattle, WA	101,045	36.34	27.46	32.80	51	3,817	41.50	40.69
Milwaukee, WI	172,257	30.35	24.45	31.71	72	15,065	183.35	156.89
Average[g]	95,673	35.65	27.97	31.95	70	4,433	55.66	51.71
Other Metropolitan								
Alabama	57,016	29.02	22.10	29.95	84	5,201	31.88	31.26
Arizona	50,886	35.74	31.33	31.70	79	2,024	35.73	34.64
Connecticut	120,247	39.65	30.57	33.86	66	1,629	43.81	43.07
Kansas	16,227	29.79	23.15	30.59	83	2,318	32.78	31.98
New Jersey	576,193	38.23	28.19	33.80	69	10,671	41.45	40.67
Oklahoma	93,197	36.37	29.25	30.48	57	2,797	41.28	40.03
Oregon	36,836	30.79	25.76	31.26	46	939	36.34	35.66
Washington	88,725	30.88	25.20	31.87	54	3,798	33.07	32.14
Wisconsin	161,717	27.21	21.44	30.65	48	29,226	115.87	102.34
Average	133,449	33.08	26.33	31.57	65	6,511	45.80	43.53
Non-Metropolitan								
Alabama	17,539	30.02	22.39	29.28	91	1,130	28.12	27.44
Arizona	19,420	34.83	28.38	30.79	75	274	32.27	30.75
Connecticut	13,334	32.75	28.53	31.73	57	175	38.59	37.79
Kansas	8,978	32.53	23.37	28.90	88	747	30.28	29.42
Oklahoma	70,935	31.48	25.08	28.99	58	827	32.37	31.77
Oregon	36,488	30.89	25.95	30.97	40	469	33.70	33.14
Washington	38,741	28.40	23.96	31.22	41	92	33.80	33.28
Wisconsin	97,194	25.48	21.45	29.46	52	2,166	97.66	88.62
Average	37,829	30.80	24.89	30.17	63	735	40.85	39.03

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S18-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: SUBSEQUENT HOSPITAL CARE, LTD. (CPT-4 90250), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	78%	75%	54%	68%	51%	15th	1st
NYC Suburbs-L.I., NY	65	61	72	111	68	5	10
Los Angeles, CA	79	73	73	93	68	15	10
Birmingham, AL	78	78	90	114	89	15	20
Phoenix, AZ	83	83	78	93	78	20	10
Hartford, CT	84	72	90	108	78	15	20
Kansas City, KS	64	61	95	147	90	5	20
Newark, NJ	78	70	83	107	75	10	15
Oklahoma City, OK	82	81	83	102	83	15	15
Portland, OR	79	77	100	126	97	5	40
Seattle, WA	76	67	90	119	81	5	30
Milwaukee, WI	81	16	104	130	20	1	20
Average[b]	78	67	90	116	77	10	21
Other Metropolitan							
Alabama	76	71	103	136	96	5	40
Arizona	88	90	89	101	92	20	25
Connecticut	77	71	85	111	79	5	15
Kansas	78	72	103	137	96	10	45
New Jersey	74	69	88	120	83	5	20
Oklahoma	80	73	84	104	76	10	15
Oregon	84	72	102	121	88	5	30
Washington	82	78	103	126	99	15	50
Wisconsin	79	21	113	143	30	1	20
Average	80	69	97	122	82	8	29
Non-Metropolitan							
Alabama	75	82	98	131	107	1	60
Arizona	81	92	88	108	100	35	45
Connecticut	87	75	97	111	84	10	15
Kansas	72	79	89	124	98	10	35
Oklahoma	80	79	92	116	91	15	40
Oregon	84	78	100	119	93	10	40
Washington	84	72	110	130	94	20	40
Wisconsin	84	24	116	137	33	5	30
Average	81	73	99	122	88	13	38

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

Wisconsin are anomalously high for this and the two following hospital visits. We are not sure why this is the case, but it is not due to a comutational error by us since these high fees also appear in the PHCS fee statistics published by HIAA.

The fees for intermediate and extended subsequent hospital care (Tables S19-A and S19-B, and S20-A and S20-B, respectively) follow generally the same pattern of substantial MFS increases as the preceeding hospital visit. The extended visit is especially striking in that Medicare fees increase in all areas, often by 30 percent or more. Moreover, in each of the three categories of areas in the nine states--largest metropolitan, other metropolitan, and nonmetropolitan--MFS amounts, on average, exceed physicians' submitted charges (Table S20-B). Payment is quite competitive with commercial fees.

Fees for comprehensive consultation (Tables S21-A and S21-B) also are raised by the MFS, but not as dramatically as hospital visit payments. Some areas with large increases: Oklahoma City, from $70 to $94, or from 64 to 87 percent of the mean commercial fee; Seattle, from $78 to $102 or from 63 to 83 percent of the mean private fee; and rural Oklahoma, from $73 to $89, or from 72 to 89 percent of the mean private fee. However, other areas decline: Los Angeles, from $128 to $111, and Newark, from $110 to $106. On average, the MFS pays at about the 25 percentile of the private charge distribution, slightly higher in rural areas, and slightly lower in the largest metropolitan areas.

MFS amounts were not available for individual psychotherapy (Tables S22-A and S22-B). However, this service is interesting for the wide range of 1988 Medicare alloweds relative to commercial insurer alloweds. Surprisingly, in Manhattan Medicare paid more on average than the estimated mean private fee for psychotherapy, $81 versus $77. The mean Medicare allowed was at the 60th percentile of the private charge distribution. Medicare also paid relatively well in NYC suburbs/Long Island. Conversely, in Birmingham Medicare paid only $39 versus a private fee of $69, in Hartford, only $42 versus $76, in other metropolitan Alabama, only $35 versus $72.

TABLE S19-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: SUBSEQUENT HOSPITAL CARE, INTER. (CPT-4 90260), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	372,138	$68.01	$53.98	$43.35	84%	5,497	$78.38	$73.35
NYC Suburbs-L.I., NY[f]	975,452	49.74	32.87	43.15	77	8,877	61.35	58.42
Los Angeles, CA[f]	983,110	56.82	39.49	42.07	90	16,912	68.62	64.71
Birmingham, AL	76,040	37.75	28.12	36.07	88	6,547	38.08	37.28
Phoenix, AZ	108,914	43.48	36.21	38.35	70	5,187	48.83	46.96
Hartford, CT	70,868	38.62	30.83	38.95	85	1,194	42.98	41.71
Kansas City, KS	32,648	41.27	28.11	37.02	91	1,199	42.33	40.93
Newark, NJ	233,195	43.05	33.08	40.43	77	4,567	47.72	45.81
Oklahoma City, OK	42,352	38.77	27.91	36.04	56	2,152	41.60	40.59
Portland, OR	26,224	39.14	30.94	37.97	67	835	44.45	42.82
Seattle, WA	94,871	43.43	31.65	38.93	49	2,712	52.49	50.92
Milwaukee, WI	94,160	41.84	33.35	37.68	72	9,642	112.43	97.84
Average[g]	86,586	40.82	31.13	37.94	73	3,782	52.32	49.43
Other Metropolitan								
Alabama	82,098	33.29	23.58	35.67	89	10,471	39.52	38.76
Arizona	29,705	37.74	31.22	37.63	74	848	50.54	49.87
Connecticut	96,782	39.44	30.57	39.74	63	1,914	44.60	42.93
Kansas	11,252	44.93	32.56	36.39	86	1,389	45.37	44.47
New Jersey	681,960	40.49	29.58	40.04	81	21,619	45.31	43.91
Oklahoma	37,202	39.62	29.75	36.19	63	1,546	42.53	41.64
Oregon	21,553	38.03	30.00	37.11	50	396	45.06	43.13
Washington	101,791	36.41	28.68	37.87	69	2,522	39.01	38.12
Wisconsin	66,921	34.29	26.97	36.54	62	14,883	111.52	101.11
Average	125,474	38.25	29.21	37.46	71	6,176	51.50	49.33
Non-Metropolitan								
Alabama	35,193	30.99	22.71	34.86	91	1,172	31.19	30.12
Arizona	18,485	39.85	31.54	36.58	78	323	43.50	40.87
Connecticut	13,858	35.04	29.07	37.67	61	83	39.49	38.35
Kansas	17,425	42.75	32.81	34.38	83	465	40.64	39.89
Oklahoma	30,060	32.78	23.83	34.52	58	364	34.70	33.42
Oregon	15,405	40.64	30.62	36.78	53	120	42.54	41.71
Washington	19,359	36.23	28.46	37.07	51	80	35.33	34.71
Wisconsin	39,049	30.56	24.37	35.05	52	1,277	98.86	88.53
Average	23,604	36.11	27.93	35.86	66	486	45.78	43.45

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S19-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: SUBSEQUENT HOSP. CARE, INTER. (CPT-4 90260), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	79%	74%	64%	80%	59%	15th	5th
NYC Suburbs-L.I., NY	66	56	87	131	74	5	25
Los Angeles, CA	70	61	74	107	65	5	5
Birmingham, AL	74	75	96	128	97	10	45
Phoenix, AZ	83	77	88	106	82	20	25
Hartford, CT	80	74	101	126	93	10	45
Kansas City, KS	68	69	90	132	90	15	25
Newark, NJ	77	72	94	122	88	15	30
Oklahoma City, OK	72	69	93	129	89	15	30
Portland, OR	79	72	97	123	89	10	40
Seattle, WA	73	62	90	123	76	5	20
Milwaukee, WI	80	34	90	113	39	5	10
Average[b]	76	67	93	122	83	12	30
Other Metropolitan							
Alabama	71	61	107	151	92	5	40
Arizona	83	63	100	121	75	15	40
Connecticut	78	71	101	130	93	15	40
Kansas	72	73	81	112	82	15	20
New Jersey	73	67	99	135	91	5	40
Oklahoma	75	71	91	122	87	10	30
Oregon	79	70	98	124	86	5	20
Washington	79	75	104	132	99	10	50
Wisconsin	79	27	107	135	36	1	15
Average	77	64	99	129	82	9	33
Non-Metropolitan							
Alabama	73	75	112	154	116	20	65
Arizona	79	77	92	116	90	20	45
Connecticut	83	76	108	130	98	5	50
Kansas	77	82	80	105	86	25	30
Oklahoma	73	71	105	145	103	10	45
Oregon	75	73	91	120	88	5	20
Washington	79	82	102	130	107	35	60
Wisconsin	80	28	115	144	40	1	20
Average	77	71	101	131	91	15	42

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S20-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: SUBSEQUENT HOSPITAL CARE, EXTENDED (CPT-4 90270), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	80,122	$70.28	$53.92	$58.22	81%	1,224	$87.58	$84.15
NYC Suburbs-L.I., NY[f]	233,812	51.13	32.76	57.97	73	2,161	70.90	66.71
Los Angeles, CA[f]	526,681	71.41	52.66	56.58	94	11,588	86.70	84.13
Birmingham, AL	7,862	44.40	31.81	48.68	96	1,051	45.10	43.87
Phoenix, AZ	35,433	49.63	42.11	51.66	81	2,863	64.59	62.62
Hartford, CT	13,287	40.66	32.92	52.44	85	463	51.04	49.58
Kansas City, KS	10,219	57.68	45.37	49.90	94	418	52.00	51.66
Newark, NJ	63,303	48.86	36.17	54.44	79	1,319	60.18	58.96
Oklahoma City, OK	11,272	50.24	31.93	48.61	62	669	44.44	43.66
Portland, OR	6,074	55.73	44.74	51.15	67	649	69.71	67.77
Seattle, WA	15,802	53.13	37.71	52.44	46	593	65.63	64.16
Milwaukee, WI	21,661	51.77	38.80	50.81	67	3,066	125.18	110.29
Average[g]	20,546	50.23	37.95	51.13	75	1,232	64.21	61.40
Other Metropolitan								
Alabama	17,054	37.36	27.50	48.15	81	2,026	37.35	36.51
Arizona	8,652	44.48	35.84	50.70	90	309	41.90	40.90
Connecticut	31,384	46.34	36.68	53.37	75	590	60.06	57.10
Kansas	1,494	54.12	36.20	48.79	87	126	48.83	48.40
New Jersey	167,243	49.70	35.95	53.92	78	5,560	56.50	54.39
Oklahoma	6,651	48.19	33.84	48.66	69	365	54.24	53.02
Oregon	4,383	52.43	43.82	49.99	47	135	75.12	72.91
Washington	29,797	47.91	36.73	50.79	71	863	51.44	50.69
Wisconsin	9,942	49.18	36.80	49.39	56	2,761	102.96	97.59
Average	30,733	47.75	35.93	50.42	73	1,415	58.71	56.83
Non-Metropolitan								
Alabama	7,213	34.04	25.61	47.11	94	235	31.06	30.84
Arizona	9,038	53.55	43.24	49.35	82	126	59.86	56.71
Connecticut	1,942	42.57	34.65	50.74	83	7	57.14	57.14
Kansas	2,928	45.28	34.74	46.42	83	191	43.26	42.79
Oklahoma	5,390	39.98	27.91	46.65	75	71	51.41	50.01
Oregon	3,150	52.66	40.11	49.57	44	39	60.05	59.18
Washington	5,181	47.57	41.32	49.98	47	14	47.57	47.57
Wisconsin	9,725	43.39	32.33	47.31	53	359	69.44	57.36
Average	5,571	44.88	34.99	48.39	70	130	52.47	50.20

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S20-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: SUBSEQUENT HOSP. CARE, EXT. (CPT-4 90270), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	77%	64%	83%	108%	69%	10th	15th
NYC Suburbs-L.I., NY	64	49	113	177	87	1	40
Los Angeles, CA	74	63	79	107	67	15	15
Birmingham, AL	72	73	110	153	111	10	65
Phoenix, AZ	85	67	104	123	82	15	35
Hartford, CT	81	66	129	159	106	20	55
Kansas City, KS	79	88	87	110	97	25	30
Newark, NJ	74	61	111	151	92	10	55
Oklahoma City, OK	64	73	97	152	111	5	70
Portland, OR	80	66	92	114	75	15	25
Seattle, WA	71	59	99	139	82	5	25
Milwaukee, WI	75	35	98	131	46	5	20
Average[b]	76	65	103	137	89	12	42
Other Metropolitan							
Alabama	74	75	129	175	132	5	90
Arizona	81	88	114	141	124	10	85
Connecticut	79	64	115	146	93	20	45
Kansas	67	75	90	135	101	20	40
New Jersey	72	66	108	150	99	10	55
Oklahoma	70	64	101	144	92	5	35
Oregon	84	60	95	114	69	20	25
Washington	77	72	106	138	100	10	50
Wisconsin	75	38	100	134	51	5	30
Average	75	67	106	142	96	12	51
Non-Metropolitan							
Alabama	75	83	138	184	153	55	90
Arizona	81	76	92	114	87	10	25
Connecticut	81	61	119	146	89	< 0	40
Kansas	77	81	103	134	108	30	50
Oklahoma	70	56	117	167	93	5	45
Oregon	76	68	94	124	84	30	40
Washington	87	87	105	121	105	15	60
Wisconsin	75	56	109	146	82	1	50
Average	78	71	110	142	100	18	50

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S21-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: COMPREHENSIVE CONSULTATION (CPT-4 90620), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	97,508	$182.04	$120.64	$115.68	76%	6,378	$171.84	$167.62
NYC Suburbs-L.I., NY[f]	236,545	153.84	111.18	115.20	78	10,830	142.11	135.98
Los Angeles, CA[f]	165,230	177.60	128.42	111.39	93	13,292	181.59	173.82
Birmingham, AL	5,586	113.63	89.26	94.15	86	899	108.79	107.33
Phoenix, AZ	40,923	128.20	102.18	101.05	71	3,489	127.92	124.98
Hartford, CT	20,105	115.16	94.43	102.44	83	1,618	110.01	107.59
Kansas City, KS	8,429	116.77	84.88	97.38	92	772	111.05	110.81
Newark, NJ	54,891	134.09	110.42	106.44	74	2,378	138.36	135.41
Oklahoma City, OK	13,052	108.62	69.51	93.87	61	773	109.62	108.31
Portland, OR	7,858	112.08	87.40	99.72	59	791	118.65	116.77
Seattle, WA	16,684	116.90	78.25	102.33	45	1,278	125.38	123.61
Milwaukee, WI	26,818	124.67	97.07	98.34	75	1,794	130.59	129.24
Average[g]	21,594	118.90	90.38	99.52	72	1,532	120.04	118.23
Other Metropolitan								
Alabama	8,903	108.18	84.46	93.13	89	1,530	101.61	100.10
Arizona	9,270	118.77	96.20	99.15	83	598	116.26	113.98
Connecticut	35,650	126.07	100.54	105.11	73	1,895	131.51	128.43
Kansas	12,146	109.62	87.06	95.12	88	614	108.92	107.38
New Jersey	141,569	127.52	103.07	105.70	75	9,783	131.40	128.12
Oklahoma	11,042	116.23	87.23	94.38	65	684	115.77	114.41
Oregon	6,036	115.76	85.18	97.50	47	420	121.47	119.58
Washington	26,545	113.85	90.50	99.48	58	1,843	118.76	117.86
Wisconsin	17,314	105.63	83.38	95.23	51	2,405	121.85	120.40
Average	29,831	115.74	90.85	98.31	70	2,197	118.62	116.70
Non-Metropolitan								
Alabama	1,897	97.28	76.84	90.70	96	169	97.28	93.49
Arizona	4,589	122.12	97.09	96.12	76	111	116.71	113.00
Connecticut	2,465	111.52	93.66	98.92	80	56	107.70	106.89
Kansas	4,177	102.67	81.99	89.59	89	163	100.26	99.98
Oklahoma	4,455	97.34	72.66	89.46	69	117	101.32	100.26
Oregon	4,424	103.28	82.71	96.47	44	89	99.91	99.24
Washington	3,535	113.38	93.59	97.33	38	36	125.83	124.77
Wisconsin	3,401	104.65	82.09	91.20	45	125	106.78	105.88
Average	3,618	106.53	85.08	93.72	67	108	106.97	105.44

Note: All physician specialties are included. For footnctes, see after Table S24-A.

TABLE S21-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: COMPREHENSIVE CONSULTATION (CPT-4 90620), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	66%	72%	64%	96%	69%	25th	20th
NYC Suburbs-L.I., NY	72	82	75	104	85	25	35
Los Angeles, CA	72	74	63	87	64	20	15
Birmingham, AL	79	83	83	105	88	20	25
Phoenix, AZ	80	82	79	99	81	15	15
Hartford, CT	82	88	89	108	95	30	35
Kansas City, KS	73	77	83	115	88	10	15
Newark, NJ	82	82	79	96	79	25	25
Oklahoma City, OK	64	64	86	135	87	10	25
Portland, OR	78	75	89	114	85	15	25
Seattle, WA	67	63	88	131	83	10	20
Milwaukee, WI	78	75	79	101	76	10	10
Average[b]	76	77	84	112	85	16	22
Other Metropolitan							
Alabama	78	84	86	110	93	25	35
Arizona	81	84	83	103	87	20	25
Connecticut	80	78	83	105	82	25	25
Kansas	79	81	87	109	89	15	25
New Jersey	81	80	83	103	83	25	30
Oklahoma	75	76	81	108	82	15	20
Oregon	74	71	84	114	82	10	15
Washington	79	77	87	110	84	15	20
Wisconsin	79	69	90	114	79	10	20
Average	78	78	85	108	85	18	24
Non-Metropolitan							
Alabama	79	82	93	118	97	25	30
Arizona	80	86	79	99	85	25	25
Connecticut	84	88	89	106	93	25	30
Kansas	80	82	87	109	90	25	30
Oklahoma	75	72	92	123	89	20	35
Oregon	80	83	93	117	97	30	45
Washington	83	75	86	104	78	10	10
Wisconsin	78	78	87	111	86	15	15
Average	80	81	88	111	89	22	28

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S22-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: INDIVIDUAL PSYCHOTHERAPY (CPT-4 90844), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	42,559	$102.51	$81.22	.	77%	27,813	$79.46	$77.10
NYC Suburbs-L.I., NY[f]	72,607	82.18	64.35	.	78	27,581	73.22	70.32
Los Angeles, CA[f]	161,783	125.40	77.38	.	90	47,749	101.87	98.39
Birmingham, AL	642	81.73	39.16	.	74	2,466	70.50	69.01
Phoenix, AZ	7,160	89.11	55.11	.	68	8,390	85.13	82.14
Hartford, CT	4,588	64.39	42.11	.	74	12,045	77.07	75.71
Kansas City, KS	2,504	89.74	54.80	.	98	3,979	80.76	79.28
Newark, NJ	8,435	82.85	50.55	.	75	6,160	77.23	74.25
Oklahoma City, OK	5,785	81.89	63.06	.	73	3,639	73.10	71.86
Portland, OR	3,138	68.50	43.93	.	71	7,051	76.07	74.40
Seattle, WA	10,419	84.78	53.37	.	68	11,473	76.97	75.15
Milwaukee, WI	1,426	108.41	66.56	.	63	8,201	79.49	78.34
Average[g]	4,900	83.49	52.07	.	74	7,045	77.37	75.57
Other Metropolitan								
Alabama	1,420	65.40	35.10	.	88	3,882	73.09	71.78
Arizona	3,612	76.59	54.42	.	66	2,107	81.65	78.61
Connecticut	6,682	65.03	43.96	.	72	13,459	81.82	79.76
Kansas	2,718	81.57	56.05	.	95	3,082	73.80	72.37
New Jersey	26,340	78.91	48.56	.	74	23,543	78.09	76.04
Oklahoma	3,969	79.96	50.37	.	79	3,409	80.69	77.89
Oregon	1,360	69.12	35.86	.	45	3,485	71.69	70.09
Washington	7,229	78.29	55.65	.	69	6,389	70.15	68.64
Wisconsin	2,366	87.25	57.57	.	78	17,442	72.37	70.94
Average	6,188	75.99	48.62	.	74	8,533	75.93	74.01
Non-Metropolitan								
Alabama	122	60.65	29.21	.	93	454	67.70	64.67
Arizona	858	71.58	37.19	.	67	446	71.30	69.61
Connecticut	1,070	66.05	42.91	.	51	821	69.17	67.34
Kansas	997	72.08	54.85	.	93	746	68.53	66.77
Oklahoma	639	87.86	48.99	.	76	220	87.26	86.99
Oregon	605	76.65	32.94	.	41	484	64.93	63.57
Washington	1,588	73.15	50.79	.	61	226	64.57	62.93
Wisconsin	672	74.05	58.16	.	80	656	66.71	65.32
Average	819	72.76	44.38	.	70	507	70.02	68.40

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S22-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: INDIVIDUAL PSYCHOTHERAPY (CPT-4 90844), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	79%	105%	.	.	.	60th	.
NYC Suburbs-L.I., NY	78	92	.	.	.	45	.
Los Angeles, CA	62	79	.	.	.	25	.
Birmingham, AL	48	57	.	.	.	10	.
Phoenix, AZ	62	67	.	.	.	10	.
Hartford, CT	65	56	.	.	.	5	.
Kansas City, KS	61	69	.	.	.	10	.
Newark, NJ	61	68	.	.	.	10	.
Oklahoma City, OK	77	88	.	.	.	25	.
Portland, OR	64	59	.	.	.	5	.
Seattle, WA	63	71	.	.	.	10	.
Milwaukee, WI	61	85	.	.	.	35	.
Average[b]	62	69	.	.	.	13	.
Other Metropolitan							
Alabama	54	49	.	.	.	1	.
Arizona	71	69	.	.	.	15	.
Connecticut	68	55	.	.	.	5	.
Kansas	69	77	.	.	.	15	.
New Jersey	62	64	.	.	.	10	.
Oklahoma	63	65	.	.	.	10	.
Oregon	52	51	.	.	.	1	.
Washington	71	81	.	.	.	25	.
Wisconsin	66	81	.	.	.	20	.
Average	64	66	.	.	.	11	.
Non-Metropolitan							
Alabama	48	45	.	.	.	5	.
Arizona	52	53	.	.	.	1	.
Connecticut	65	64	.	.	.	5	.
Kansas	76	82	.	.	.	25	.
Oklahoma	56	56	.	.	.	20	.
Oregon	43	52	.	.	.	10	.
Washington	69	81	.	.	.	10	.
Wisconsin	79	89	.	.	.	25	.
Average	61	65				13	.

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

Eye exam and treatment (Tables S23-A and S23-B) and ECG, with report (Tables S24-A and S24-B) are atypical medical services in that the MFS will reduce their fees. The largest reduction for the former service will be in Los Angeles, from $48 to $33, or from the 30th to the 5th percentile of the private charge distribution. However, the 1988 assignment rate for this service was 94 percent in Los Angeles, indicating that Medicare might be able to reduce its fees without jeopardizing access.

For the latter service, all areas will see substantial reductions. The reduction from $30 to $22 in Oklahoma City is typical. On average, the MFS will pay only slightly more than half of the mean commercial fee, or at about the 4th percentile of the private charge distribution.

TABLE S23-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: EYE EXAM AND TREATMENT (CPT-4 92012), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	88,467	$58.81	$42.11	$34.66	70%	765	$66.94	$65.22
NYC Suburbs-L.I., NY[f]	137,783	41.95	30.05	34.42	67	1,351	45.47	44.52
Los Angeles, CA[f]	115,159	56.78	48.10	33.30	94	2,132	57.31	55.80
Birmingham, AL	3,238	33.63	28.18	27.67	92	295	34.34	33.89
Phoenix, AZ	25,481	42.76	38.61	29.88	86	528	42.20	41.14
Hartford, CT	10,053	45.91	37.66	30.51	78	316	45.71	44.67
Kansas City, KS	4,874	40.51	32.44	28.72	80	143	38.59	38.22
Newark, NJ	38,801	37.10	30.69	31.62	53	523	39.26	38.13
Oklahoma City, OK	6,987	39.90	34.64	27.82	75	444	40.08	39.00
Portland, OR	2,916	35.27	27.84	29.62	72	109	39.25	38.82
Seattle, WA	7,610	41.73	35.95	30.34	39	525	47.91	46.04
Milwaukee, WI	13,160	31.66	27.75	29.15	81	1,806	34.40	33.76
Average[g]	12,569	38.72	32.64	29.48	73	521	40.19	39.30
Other Metropolitan								
Alabama	3,607	30.43	25.81	27.28	81	291	32.60	32.20
Arizona	6,659	41.95	34.87	29.28	85	124	39.00	38.27
Connecticut	25,021	45.70	37.50	30.74	86	448	46.49	45.54
Kansas	10,441	43.01	36.15	28.18	98	211	38.73	38.38
New Jersey	84,775	37.01	31.29	31.65	38	1,472	39.65	38.78
Oklahoma	9,454	32.46	26.78	27.96	76	273	33.25	32.76
Oregon	8,172	36.58	28.20	28.93	73	75	42.32	42.07
Washington	10,703	41.01	34.63	29.15	56	668	43.78	43.23
Wisconsin	13,181	33.02	24.99	28.05	71	4,772	35.06	34.73
Average	19,113	37.91	31.14	29.02	74	926	38.99	38.44
Non-Metropolitan								
Alabama	817	35.23	32.13	26.42	88	50	36.62	36.17
Arizona	3,061	47.39	35.81	28.16	93	41	38.78	37.71
Connecticut	2,145	35.74	28.15	29.37	79	26	51.38	51.38
Kansas	14,799	37.73	32.16	26.26	89	144	35.02	34.61
Oklahoma	4,002	33.81	29.08	26.18	59	60	35.70	34.19
Oregon	4,842	42.11	29.39	28.53	73	16	44.56	44.56
Washington	5,415	41.71	36.94	28.72	42	56	39.95	39.79
Wisconsin	5,287	29.63	25.10	26.81	40	483	26.75	25.78
Average	5,046	37.92	31.10	27.56	70	110	38.60	38.02

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S23-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: EYE EXAM AND TREATMENT (CPT-4 92012), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	72%	65%	59%	82%	53%	10th	10th
NYC Suburbs-L.I., NY	72	67	82	115	77	10	20
Los Angeles, CA	85	86	59	69	60	30	5
Birmingham, AL	84	83	82	98	82	20	15
Phoenix, AZ	90	94	70	77	73	40	10
Hartford, CT	82	84	66	81	68	25	10
Kansas City, KS	80	85	71	89	75	35	10
Newark, NJ	83	80	85	103	83	20	35
Oklahoma City, OK	87	89	70	80	71	40	30
Portland, OR	79	72	84	106	76	20	20
Seattle, WA	86	78	73	84	66	30	15
Milwaukee, WI	88	82	92	105	86	25	30
Average[b]	84	83	77	91	76	28	19
Other Metropolitan							
Alabama	85	80	90	106	85	20	25
Arizona	83	91	70	84	77	30	25
Connecticut	82	82	67	82	68	20	10
Kansas	84	94	66	78	73	50	10
New Jersey	85	81	86	101	82	25	30
Oklahoma	83	82	86	104	85	25	30
Oregon	77	67	79	103	69	15	15
Washington	84	80	71	84	67	25	15
Wisconsin	76	72	85	112	81	15	20
Average	82	81	78	95	76	25	20
Non-Metropolitan							
Alabama	91	89	75	82	73	35	25
Arizona	76	95	59	79	75	40	25
Connecticut	79	55	82	104	57	< 0	< 0
Kansas	85	93	70	82	76	35	25
Oklahoma	86	85	77	90	77	20	15
Oregon	70	66	68	97	64	10	10
Washington	89	93	69	78	72	55	30
Wisconsin	85	97	90	107	104	70	70
Average	83	84	74	90	75	33	25

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

TABLE S24-A

MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) PHYSICIAN FEES: ECG WITH REPORT (CPT-4 93000), 1988

	MEDICARE					HIAA[a]		
	N	Submitted[b]	Allowed[b]	Fee Schedule[c]	Percent Assigned[d]	N	Submitted	Allowed[e]
Largest Metropolitan								
Manhattan, NY[f]	266,651	$56.86	$45.27	$28.93	67%	4,876	$58.82	$57.43
NYC Suburbs-L.I., NY[f]	660,034	50.96	41.77	28.67	63	9,926	52.53	51.46
Los Angeles, CA[f]	389,004	55.44	45.52	27.45	83	15,952	57.80	56.19
Birmingham, AL	12,539	40.10	34.39	22.00	75	2,528	38.38	37.85
Phoenix, AZ	52,085	45.76	39.74	24.21	58	3,244	46.42	45.56
Hartford, CT	36,374	38.55	31.85	24.84	85	2,547	40.43	39.72
Kansas City, KS	8,565	40.42	33.16	23.16	73	1,354	41.97	40.58
Newark, NJ	61,978	40.89	34.82	25.72	38	2,685	42.11	40.88
Oklahoma City, OK	19,975	35.81	30.50	22.24	31	1,746	37.43	37.07
Portland, OR	16,593	37.81	31.95	24.00	38	1,353	41.77	40.94
Seattle, WA	40,803	40.85	35.68	24.58	36	2,551	43.24	42.60
Milwaukee, WI	24,580	48.61	35.37	23.37	63	2,152	48.96	48.23
Average[g]	30,388	40.98	34.16	23.79	55	2,240	42.30	41.49
Other Metropolitan								
Alabama	18,698	36.54	30.93	21.67	73	4,749	38.15	37.73
Arizona	13,786	40.23	32.06	23.70	64	700	39.73	39.45
Connecticut	51,745	37.95	32.52	25.53	72	2,641	41.56	40.96
Kansas	14,388	42.45	37.39	22.55	79	1,152	43.11	42.17
New Jersey	182,419	40.04	34.40	25.78	37	12,617	42.00	40.75
Oklahoma	21,398	37.61	30.82	22.32	46	1,655	38.29	37.95
Oregon	10,860	39.98	33.95	23.44	32	658	43.29	42.57
Washington	40,977	41.51	36.64	23.62	44	3,091	43.59	42.91
Wisconsin	24,906	42.12	34.27	22.37	44	5,507	46.01	45.60
Average	42,131	39.83	33.66	23.44	55	3,641	41.75	41.12
Non-Metropolitan								
Alabama	9,201	37.57	31.96	20.71	85	558	38.08	37.98
Arizona	12,970	44.06	35.89	22.52	68	310	44.34	43.65
Connecticut	4,722	37.50	30.70	23.79	75	133	39.93	39.62
Kansas	20,196	41.46	35.65	20.77	78	624	40.45	39.41
Oklahoma	21,173	35.36	29.67	20.52	55	466	35.63	35.15
Oregon	14,950	41.18	34.15	22.99	36	314	45.42	44.62
Washington	19,513	43.92	37.80	23.11	37	135	42.30	41.57
Wisconsin	17,818	40.30	31.81	21.23	44	382	38.08	37.53
Average	15,068	40.17	33.45	21.96	60	365	40.53	39.94

Note: All physician specialties are included. For footnotes, see after Table S24-A.

TABLE S24-B

RELATIONSHIP AMONG MEAN MEDICARE AND COMMERCIAL INSURER (HIAA) FEES: ECG, WITH REPORT (CPT-4 93000), 1988

	MEAN MEDICARE ALLOWED CHARGE AS A PERCENTAGE OF:		MEDICARE FEE SCHEDULE AS A PERCENTAGE OF:			PERCENTILE OF HIAA CHARGE DISTRIBUTION CORRESPONDING TO:[a]	
	Medicare Submitted	HIAA Allowed	Medicare Submitted	Medicare Allowed	HIAA Allowed	Medicare Allowed	Medicare Fee Schedule
Largest Metropolitan							
Manhattan, NY	80%	79%	51%	64%	50%	15th	1st
NYC Suburbs-L.I., NY	82	81	56	69	56	10	5
Los Angeles, CA	82	81	50	60	49	10	1
Birmingham, AL	86	91	55	64	58	15	5
Phoenix, AZ	87	87	53	61	53	15	1
Hartford, CT	83	80	64	78	63	10	5
Kansas City, KS	82	82	57	70	57	15	5
Newark, NJ	85	85	63	74	63	20	5
Oklahoma City, OK	85	82	62	73	60	10	5
Portland, OR	85	78	63	75	59	10	5
Seattle, WA	87	84	60	69	58	15	5
Milwaukee, WI	73	73	48	66	48	15	5
Average[b]	84	82	58	70	58	14	5
Other Metropolitan							
Alabama	85	82	59	70	57	10	1
Arizona	80	81	59	74	60	15	5
Connecticut	86	79	67	79	62	10	1
Kansas	88	89	53	60	53	20	5
New Jersey	86	84	64	75	63	20	5
Oklahoma	82	81	59	72	59	10	5
Oregon	85	80	59	69	55	10	1
Washington	88	85	57	64	55	20	5
Wisconsin	81	75	53	65	49	10	1
Average	85	82	59	70	57	14	3
Non-Metropolitan							
Alabama	85	84	55	65	55	20	1
Arizona	81	82	51	63	52	25	5
Connecticut	82	77	63	77	60	5	1
Kansas	86	90	50	58	53	25	5
Oklahoma	84	84	58	69	58	15	5
Oregon	83	77	56	67	52	10	1
Washington	86	91	53	61	56	35	10
Wisconsin	79	85	53	67	57	25	5
Average	83	84	55	66	55	20	4

Note: This table is based on the "A" table for this service. See after Table S24-B for footnotes.

FOOTNOTES TO TABLES S1-A THROUGH S24-A

[a]Charges from the Health Insurance Association of America's (HIAA) Prevailing Healthcare Charges System. Charges for surgical services are from March, 1988 through February, 1989, and charges for medical services are from November, 1987 through October, 1988.

[b]Charges dated April 1, 1988 to December 31, 1988.

[c]Simulated calendar year 1988 fees using MSA/state nonmetropolitan area Geographic Adjustment Factors.

[d]Percentage of Medicare claims that were accepted on assignment from April 1, 1988 to December 31, 1988.

[e]Simulated allowed charge. Submitted charges exceeding the 90th percentile of area submitted charges were set equal to the 90th percentile charge.

[f]Medicare fees are for calendar year 1988.

[g]Excludes Manhattan, NY, New York City Suburbs/Long Island, NY, and Los Angeles, CA.

SOURCES FOR TABLES S1-A THROUGH S24-A

1988 Medicare Fees and Percent Assigned: Center for Health Economics Research state databases of 100 percent Medicare Part B claims for all areas except Manhattan, NY, NYC Suburbs/Long Island, NY, and Los Angeles, CA. For the latter three areas, the Health Care Financing Administration 1988 BMAD Procedure file is the source.

Medicare Fee Schedule: Relative value units were provided by the Health Care Financing Administration. Geographic Adjustment Factors for Metropolitan Statistical Areas and state nonmetropolitan areas were computed from Table B-1 in Welch, Zuckerman, and Pope, 1989.

Commercial Insurer Fees: Health Insurance Association of America (HIAA) Prevailing Healthcare Charges System (PHCS).

FOOTNOTES FOR TABLES S1-B THROUGH S24-B

[a]The percentile of the commercial insurer (HIAA PHCS) charge distribution that is closest to the mean Medicare allowed charge or the Medicare Fee Schedule amount.

[b]Excludes Manhattan, NY, NYC Suburbs/Long Island, NY, and Los Angeles, CA.

SOURCES FOR TABLES S1-B THROUGH S24-B

See Source Notes to Tables S1-A through S24-A for sources.

11.0 CONCLUSIONS AND IMPLICATIONS

The changes the Medicare Fee Schedule (MFS) will cause in the relation between Medicare and private fees for a service in an area depends on four factors:

(1) the current Medicare fee level in the area;
(2) the MFS service-specific relative value units;
(3) the MFS area-specific geographic adjustment factors; and
(4) changes in private fees in response to the MFS.

As is well-known, the resource-based relative value units tend to raise fees for medical services and lower them for surgical services. The MFS geographic adjustment factors tend to lower fees in large urban areas and raise them in rural areas, especially because of the adjustment for only one-quarter of physician time costs. (The overall conversion factor would also affect fee relationships if budget neutrality is not maintained.)

In the fee tabulations we have reported, the tendency of the MFS to raise visit fees and lower fees for surgical procedures is evident. In addition, we have observed the tendency of fees to fall in very large urban areas and rise in rural areas. Nevertheless, the interaction of the factors listed above creates exceptions to these generalizations. For example, although most fees in Manhattan will fall, the MFS will raise the fee for comprehensive initial hospital care in Manhattan by 47 percent, from $76 to $112. The exceptions to the generalizations point to the need for careful analysis before reaching conclusions about fee changes for particular services in particular areas.

Moreover, our comparisons assume that commercial insurers will not change their fees. But surely there will be some response of private insurers to the implementation of the MFS. Medicare is too important a purchaser of physician services for a major change in its reimbursement policies to be ignored by competing insurers. Just as several Blue Cross plans have adopted payment by DRGs following the lead of Medicare's Prospective Payment System,

it is likely that some private insurers will modify their reimbursement to more closely resemble the MFS. To the extent this occurs, the relationship between Medicare and private fees may be disrupted much less than is indicated by our results. However, the private response will occur only with a lag and at an uneven rate in different areas of the nation. The most rapid and complete response to the MFS by private insurers will occur where Medicare has the largest share of the physician services market and can set "the going rate." This would be in areas with large concentrations of elderly such as Florida and Arizona. In areas where Medicare has a small market share, there might be little private response.

What do our results imply about the access of Medicare beneficiaries to physician services? A complete analysis of the access issue is beyond the scope of this report. We have examined relative fees; access depends on the sensitivity of physicians to relative fees in providing their services, and on other factors such as the market shares of competing insurers, the availability of alternative providers, the ability of Medicare beneficiaries to pay for services out of pocket, and the influence of fees on the geographic location decisions of physicians. Moreover, we have not examined how the balance billing limits imposed with the MFS will affect the <u>total</u> compensation received by physicians for providing services to Medicare beneficiaries. A final caveat when discussing "access" is that more access is not always better public policy. For example, Medicare beneficiaries perhaps have had "too much" access to expensive surgical procedures in large cities.

With these limitations in mind, we can make the following comments about access. Presumably by raising fees the MFS should improve access for visits and in rural areas, while perhaps lessening access by lowering fees for surgical services and in large cities. Among the areas we studied, changes from the MFS in Manhattan, New York, clearly show the greatest decrease in Medicare payments. We estimate that overall, Medicare fees could decline from 70 percent to 56 percent of commercial insurer fees. Even medical (mostly visit) fees in Manhattan will likely fall from 71 percent to about 60 percent of average commercial fees under the MFS. Medicare fees in Los Angeles will also fall, but not as much as in Manhattan, and the average Medicare

assignment rate is much lower in Manhattan (74 percent) than in Los Angeles (90 percent).

Manhattan MFS amounts are low relative to commercial fees for certain "garden variety" procedures performed by general surgeons. The three procedures that we studied are gallbladder removal, hernia repair, and hysterectomy. The MFS amount in Manhattan may be 35 percent, 32 percent, and 24 percent, respectively, of the average commercial insurer fee for these three procedures.

In fact, hernia repair and hysterectomy seem to be paid less by the MFS relative to commercial fees on average across all the areas we studied. These two procedures will be paid only 48 and 44 percent of commercial fees on average. They are the only procedures with average MFS amounts less than half of the average private fee. Medicare probably has a lower market share for these procedures than some others, which could make their relatively low fees an additional cause for concern. On the other hand, their average assignment rates of 63 percent (hernia repair) and 64 percent (hysterectomy) are not especially low.

In addition to New York and Los Angeles, Medicare surgical fees in Arizona, with its large Medicare-eligible population, would fall sharply under the MFS. For example, in Phoenix, we estimate that average Medicare surgical fees will fall from 83 percent to 64 percent of average commercial fees. Aside from an insignificant decline in rural Oregon, nonmetropolitan Arizona is the only rural area we study where Medicare fees would decline overall (from 81 to 74 percent of commercial fees). This is entirely due to a large drop in surgical fees; medical fees will rise in rural Arizona.

The assignment rate may be a more sensitive indicator of access of Medicare beneficiaries to services than relative fees. Presumably physicians are more likely to accept assignment of Medicare claims when their private demand is weaker (see Chapter 2). Overall, 1988 assignment rates were quite high, averaging around 70 percent; this indicates good access for Medicare beneficiaries. To equalize access, it would make economic sense to raise Medicare fees for services and areas where the assignment rate is low, and lower them for services and areas with high assignment rates.

However, fee changes under the MFS do not seem to bear any clear relationship to assignment rates. Fees are sometimes raised for services or in areas with high assignment rates, and lowered for services or in areas with low assignment rates. To the extent that Medicare is the dominant buyer of physician services in an area, the relationship of fee changes to the assignment rate may not be an issue. Moreover, as we have noted, assignment rates are generally high and even with Medicare's significant fee discounts, its beneficiaries have generally enjoyed good access to a large volume of services (including some areas such as Manhattan where Medicare appears least competitive). Nevertheless, the significant changes under the MFS are occurring with little consideration of Medicare's competitive position vis-a-vis other purchasers of physician services.

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