

## MEDICARE AND MEDICAID PHYSICIAN PAYMENT INCENTIVES

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The incentives in the Medicare and Medicaid physician payment systems and their effects on six interrelated aspects of health care costs and beneficiary access to care were analyzed. Research results and data presented indicate that Medicare and Medicaid physician payment incentives are inconsistent with current public policy goals of (1) containing inflation in fees and expenditures, (2) encouraging physician participation in public programs, (3) improving the geographic and specialty distributions of physicians, (4) encouraging primary care instead of surgery, and also outpatient rather than inpatient treatment.

Three principal and interrelated concerns of health care policymakers are (1) controlling health care costs, (2) improving access to health care services, and (3) promoting high quality care. Although physician spending is only one-fifth of total health expenditures, physician decisions significantly affect costs, access and quality because physicians direct over 70 percent of all health care spending. 1/ This paper analyzes the incentives in Medicare and Medicaid physician payment policies and discusses their influence on health care costs and access for the programs' beneficiaries. While the relationship between physician reimbursement and quality of care is important, measurement problems and paucity of reliable data render it beyond the scope of this paper.

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This analysis focuses on the effects of Medicare and Medicaid reimbursement practices on six interrelated dimensions of access and costs. The paper does not concentrate on theoretical models of physician behavior but rather it points out the direction of the economic incentives contained in current Medicare and Medicaid reimbursement policies. While the most direct effect on costs is inflation in physician fees and the most direct access impact is on physician participation in the Medicare and Medicaid programs, other factors are also important. These include incentives (both in terms of relative fees and benefits covered) for physicians to specialize rather than practice general medicine, to locate in physician-dense areas, to treat patients in hospitals rather than in outpatient settings, and to provide nonprimary care instead of primary care services. All of these have significant short-run, as well as

long-run effects on Medicare, Medicaid, and total system costs.

We focused on Medicare and Medicaid physician reimbursement for three reasons. First, Medicare and Medicaid account for over one-fifth of physician spending. Second, detailed information on reimbursement methods, administrative practices, and rates encompassing the entire Nation for a large number of medical procedures is available for these programs. Third, since Medicare reimbursement is designed to pay the "going rate" in the private market, Medicare fees are believed to generally represent private sector payment patterns.

#### Physician Reimbursement Methods

In 1977 physician expenditures of \$32.2 billion accounted for 20 percent of total national health care spending. Of this amount, 37 percent was paid by private insurance, 24 percent by public programs, and 39 percent directly by patients. Medicare payments accounted for 14 percent of all physician spending, while Medicaid accounted for 6 percent.

Medicare and Medicaid pay for physician services on a fee-for-service basis. Under fee-for-service medicine, physicians are paid either according to a fee schedule or on the basis of customary, prevailing, and reasonable charges (CPR). Fee schedules are lists of maximum allowable reimbursements for a group of medical procedures. In 1975 they were used by 26 State Medicaid programs, by Blue Shield in about half of its business, and by many commercial insurers. Fee schedules can be established in several ways, including negotiation and the use of relative value studies with conversion factors. Thus, fee

levels are not generally established solely by physicians and do not necessarily reflect existing physician charge patterns. Fee schedules were the predominant method by which physicians were paid prior to the inception of Medicare in 1965, after which the CPR method became more widely used.

Customary, prevailing, and reasonable charge (CPR) reimbursement (also referred to as usual, customary, and reasonable (UCR) charge reimbursement) is the other basic fee-for-service method. In 1975 it was employed by Medicare, by 24 State Medicaid programs, by Blue Shield for about half of its business, and by the larger commercial insurers. Under this approach the reimbursement rate, known as the reasonable charge, is the lowest of the physician's actual billed charge, his customary charge for that service, and the prevailing charge (i.e., the charge generally made by most physicians) in that local geographic area. <sup>2/</sup> CPR was designed specifically to reflect what the physician normally charges his patients, as well as general charge patterns in the community. In effect, CPR is a double fee schedule--one customized to the individual physician and the other tailored to the general charges of all physicians in that local area. However, unlike fee schedules, physicians retain virtually complete control over CPR reimbursement rates, since they are based on what physicians actually bill.

In implementing the CPR reimbursement method, Medicare establishes uniform national rules to determine reimbursement rates, and contracts with 46 private insurance companies, known as carriers, which administer reimbursement. However, Medicaid has no uniform national reimbursement philosophy. State

Medicaid programs have almost complete discretion in determining physician reimbursement, subject only to the general guidelines that reimbursement rates be set high enough to attract participation of sufficient numbers of physicians and that reimbursement levels not exceed those paid by Medicare. Thirty-one State Medicaid programs employ fiscal agents to administer some aspects of reimbursement, while the other 19 programs perform these functions themselves.

One particularly important aspect of physician reimbursement is the potential for the physician to bill the patient in excess of the maximum allowable charge paid by an insurance program. Under Medicare, the physician can decide, on a claim-by-claim basis, whether to accept what Medicare reimburses as payment-in-full. If the physician accepts the Medicare-determined reimbursement rate as payment-in-full (known as accepting assignment of the benefit), he bills the program directly, except for cost-sharing amounts.

Alternatively, the physician may bill the Medicare beneficiary for any amount. The beneficiary is then responsible for paying the entire bill, including the difference between what Medicare reimburses him and what the physician bills. In contrast, Medicaid is a mandatory assignment program, and the physician may not bill the Medicaid patient above what the program pays.

#### Physician Reimbursement and Inflation

Inflation is one of the most pressing problems in the health care sector. Over the past 11 years, physician fees have increased 20 percent faster than the overall cost of living. Per capita expenditures on physician services have increased

29 percent faster than per capita spending on all goods and services. About 70 percent of these increases were due to price increases, while the remainder resulted from increases in the quantity and changes in the mix of services provided per capita.

With respect to physician fee inflation, studies of CPR and fee schedule approaches suggest that CPR is more inflationary.<sup>3/</sup> Under CPR, two factors create an environment in which physicians can influence reimbursement levels and rates of increase. These factors are (1) physician determination of CPR charges and (2) administrative practices used by carriers in calculating CPR screens. First, CPR implicitly encourages physicians to raise their fees because the higher the rate of increase in fees this year, the higher the CPR screens next year. Therefore, collectively, physicians can influence the level and rates of increase in Medicare and Medicaid CPR reimbursement rates. Second, several administrative practices may contribute to fee inflation.<sup>4/</sup> These include using separate reimbursement rates for general practitioners and specialists, using local geographic areas for calculating separate CPR screens, and merging comparable private health insurance information with Medicare and Medicaid physician charge data. For example, the more localities and specialty designations, the greater is the potential for a small number of physicians to determine the levels and rates of increase in the fee screens.

In addition to fee inflation inherent in the reimbursement method, other characteristics of Medicare and Medicaid contribute to inflation in physician expenditures. These include (1) selective assignment

provisions in Medicare; (2) "moral hazard" (i.e., induced use of medical services due to insurance); and (3) the lack of an effective mechanism to monitor and influence utilization patterns for physician services .

First, the selective Medicare assignment policy permits physicians to offset the fee restraints of the CPR screens since, on unassigned claims, physicians can charge beneficiaries more than the program pays. Second, since Medicaid has no cost-sharing and since about 70 percent of Medicare beneficiaries have their cost-sharing paid by supplementary private health insurance or Medicaid, the net cost of additional services is relatively small. Therefore, patients and physicians have few financial incentives to limit the utilization of services. Third, the lack of a utilization review system coordinated among all payors severely limits the ability to monitor patterns of care. This is especially important because under any fee-for-service system physicians can compensate for reimbursement rate limitations by increasing the quantity of services they provide or by redefining or upgrading the standard treatment patterns to include, for example, more diagnostic services or more frequent visits.

To counteract the inflationary pressures generated by price increases, the Congress mandated, through Section 224 of the 1972 Social Security Act amendments, the only enduring national effort to restrain price escalation for physician services under Medicare and Medicaid. Beginning with fiscal year 1976, a national economic index was applied to the Medicare and Medicaid programs to limit increases in prevailing charges to increases

in the cost of maintaining an office practice and increases in general earnings in the labor force. This, in effect, limits increases in program recognized fees to a level based on general (not medical care) inflation and productivity increases.

While the economic index generally reduces the absolute increase in Medicare-allowed reimbursements by 1-1/2 to 2 percentage points a year, it does not affect actual physician charges. Moreover, the economic index limit on fees may lead to an increase in the number of visits or a decrease in the quality of a visit. Furthermore, the economic index is locking into place all the existing prevailing charge imbalances between high and low fee regions and among physicians of different specialties. This occurs because as physicians' actual fees continue to increase at a faster rate than the economic index limit, over time an increasing number of claims will be paid at the Medicare prevailing charge. In effect, the prevailing charge screens are becoming fee schedules that represent historic geographic and specialty reimbursement differences.

At first glance, fee schedules would seem to have greater potential for containing inflation in fees than would the CPR system by removing physicians from exclusive control of the secular trend in fees. Additionally, by changing the relative prices of services, fee schedules could help reduce total expenditures for physician services by, for example, encouraging primary care instead of surgery. While there is some evidence that fee schedules can restrain the rate of increase in prices, they have not proven as effective in containing total expenditures on physician services. 5/

### Physician Participation

Medicare and Medicaid physician reimbursement policies directly influence physician willingness to participate and thus affect beneficiaries' access to care. Medicare has greatly improved financial access to care for the aged. However, the selective Medicare assignment system has resulted in inadequate financial protection for beneficiaries on the 50 percent of claims that are unassigned. Beneficiary out-of-pocket costs for physician charges in excess of Medicare reasonable charges increased nationally from \$81 million in 1969 to \$699 million in 1977.

The bulk of criticism of public programs, however, has been lodged against Medicaid. According to "conventional wisdom," Medicaid fees are greatly depressed. They discourage office-based private practice physicians from accepting Medicaid patients, thereby forcing patients to seek care in higher cost hospital outpatient departments, emergency rooms, or in "Medicaid mills," which circumvent depressed fees through an increased volume of services per patient. This in turn leads to a separate system of care for the poor apart from mainstream medicine.

Comparison of Medicare, Medicaid, and private insurance reimbursement levels indicates the relative financial access to care among these groups. Table 1 shows 1975 national average fees for Medicare, Medicaid, and the "best" Blue Shield plan and the physicians' usual fee for each of seven specific medical procedures from a survey conducted by Sloan et al. 6/ For the follow-up office visit, which is a fairly common procedure and thus may be a good indicator of routine access to care, Medicare and Blue Shield fees are

very close (the "best" Blue Shield fees are 5 percent greater than Medicare fees). Similarly, for four of the other six procedures Medicare fees average at least 92 percent of the highest Blue Shield fees. Second, both Medicare and Blue Shield fees average about 75 to 80 percent of what physicians report they usually charge. Thus, as measured by third-party reimbursement levels, it would seem that Medicare patients are on about the same financial footing as are Blue Shield patients in seeking access to care. 7/

On the other hand, Medicaid fees average about 75 to 80 percent of Medicare and Blue Shield fees and about 60 percent of physicians' usual fees for the seven procedures. Reimbursement data from the Medicare and Medicaid programs confirm these results. From 1975 surveys of Medicare and Medicaid reimbursement rates, indices based upon a nationally representative basket of 29 specific medical services indicated that Medicaid reimbursement rates averaged 82 percent of Medicare fees for general practitioners and 77 percent for specialists. However, while Medicaid reimbursement rates were virtually equal to Medicare reimbursement levels in 20 States, in 11 States they were less than 70 percent. 8/

With respect to physician participation in Medicare, survey data indicated that while 18 percent of physicians were always willing to accept Medicare assignment, 30 percent of physicians' never accepted assignment. 9/ Moreover, Paringer found that physicians willingness to accept Medicare assignment was highly related to Medicare reimbursement levels--a 1 percent increase in reimbursement levels would result in a 0.5 to 1.5 percent increase in the assignment rate (controlling for other factors). 10/

With respect to Medicaid participation, data from Sloan et al. show that 32 percent of physicians do not treat Medicaid patients. In analyzing the impact of Medicaid reimbursement rates on physician willingness to treat Medicaid patients, Sloan et al. found that, holding other factors constant, a 10 percent increase in average Medicaid fees would increase physician participation by 7 percent. Hadley and Lee, as well as Held, Manheim, and Woolridge, found similar results. 11/ Thus it appears that physician participation may be relatively sensitive to Medicare and Medicaid reimbursement levels. However, these studies also indicate that increases in Medicare or Medicaid reimbursements, accompanied by commensurate reimbursement increases by other payors, could lead to increased physician expenditures with no change in Medicare and Medicaid physician participation.

#### Geographic and Specialty Distribution

Much national concern exists over the geographic and specialty maldistribution of physicians. This maldistribution has limited access to primary care services and increased health care costs through the provision of more intensive and, consequently, higher priced services. The literature on physician location and specialty choice indicates that financial incentives play a minor role in the physician decision process. Nevertheless, from a Federal policy perspective, Medicare and Medicaid reimbursement practices should support, or at least not contradict, government policies to attract physicians into shortage specialties and underserved areas. 12/

Medicare and Medicaid reimbursement policies may affect physician

location choices because reimbursement rates vary among geographical areas. In 1975, Medicare carriers divided the country into over 290 different reimbursement areas varying in size from subcounty areas to entire States (there were only 6 State-wide reimbursement areas in 1975). State Medicaid programs have established about 185 different reimbursement areas, 34 of which are complete States. In 1975, Medicare general practitioner and specialist fees averaged 23 percent higher in metropolitan than non-metropolitan counties, while there was no difference in average Medicaid fees. Adjusting for cost-of-living differences, the Medicare metropolitan/nonmetropolitan fee difference was reduced to 8 percent, while Medicaid fees were actually 12 percent higher in rural areas. However, the results for Medicaid can largely be attributed to the fact that 34 States paid physicians the same fee regardless of location within the State. 13/

Table 2 shows the relationship between physician density and average Medicare and Medicaid prevailing charges for specialists. A continuum exists from the least to the most physician-dense areas for Medicare specialist fees. Prevailing charges average 33 percent higher in counties with more than 175 physicians per 100,000 population than in counties with fewer than 75 physicians per 100,000 population. In contrast, there appears to be very little relationship between Medicaid fees and physician density. (The correlation between physician density and Medicare specialist fees is .32 and -.07 for Medicaid fees.) 14/

The relationship between county per capita income and average Medicare and Medicaid fees is displayed in table 2. The data show

that average Medicare specialist prevailing charges are directly related to county per capita income. Medicare fees average 30 percent higher in the high-income counties compared with the low-income counties. Average Medicaid fees are virtually constant across all counties regardless of per capita income. (In fact, the correlation between per capita income and Medicare specialist fees is .40 and -.03 for Medicaid fees.) 14/

While higher practice costs in physician-dense and high-income areas could explain the inverse relationship between these factors and Medicare reimbursement levels, several studies question such a relationship. 15/ Thus, to the extent that Medicare fees reflect private market patterns, existing physician fee patterns may provide financial incentives for physicians to locate in high-income, physician-dense metropolitan areas.

Some critics contend that, other things being equal, Medicare and Medicaid physician reimbursement policies have encouraged increased specialization. While three pieces of data give credence to this argument, it must be recognized that specialists may provide a different type or higher quality service. First, in fiscal year 1975, all but six carriers, encompassing 91 percent of Medicare physician payments, recognized specialty reimbursement differentials. Under Medicaid, specialist reimbursement differentials are less common, occurring in 25 states with 48 percent of physician payments.

Second, Schieber et al. 16/ found statistically significant differences between general practitioner and specialist Medicare reimbursement rates for 27 of 39 procedures though differences generally were

less than 10 percent. Of the 27 procedures with statistically significant differences, specialists fees were higher than those of general practitioners in 19 cases, and the types of services with higher specialist than general practitioner fees were medical visits and surgery, which represent about three-quarters of Medicare physician reimbursements.

Third, based on a 5 percent sample of Medicare claims, table 3 shows the average annual rate of growth in Medicare allowed charges for selected specialties between 1968-1972, 1972-1975, and 1968-1975. During each of these periods, the rates of growth of the two primary care specialties--general practice and internal medicine--were less than the rates of growth for all physicians and for specialists. Thus, the observed general practitioner/specialist reimbursement differentials and the slower rates of growth in allowed charges for primary care specialties indicate that the Medicare program does not provide economic incentives for physicians to choose primary care specialties.

#### Place of Treatment and Type of Service Rendered

A frequent criticism of the existing health care system is that it contains financial incentives for physicians to treat patients in the hospital when treatment on an outpatient basis might be equally suitable. Another criticism is that the current system encourages expensive, technologically oriented medical care rather than routine primary care services. While the following analysis of physician reimbursement rates provides some evidence that these allegations have merit, it must be remembered that the specific features of health

insurance benefit packages also provide strong incentives with respect to place and type of service rendered.

Two pieces of evidence from the Medicare and Medicaid programs suggest that current physician reimbursement rates contain financial incentives for physicians to treat patients in the hospital as opposed to their offices. As shown in table 4, national average reimbursement rates for initial visits for general practitioners and specialists indicate that both of these groups can receive Medicare and Medicaid reimbursements 14 to 20 percent greater if the initial visit is performed in the hospital instead of in the physician's office. For follow-up visits, physicians can receive reimbursement under Medicare averaging 13 to 21 percent more in the hospital than in the office and 3 to 7 percent more under Medicaid.

While hospitalized patients may be sicker and require more intensive physician care (e.g., on average, hospital visits are approximately 20 percent longer than office visits 17/), the physician himself bears none of the overhead expenses (e.g., rent, labor cost, equipment, drugs, etc.) associated with treating the patient in the office when treating a patient in the hospital, although he must bear time and transportation costs in going to the hospital. Since practice expenses compromise about 40 percent of a physician's gross revenues, the net value of the office visit reimbursement rate, after deducting office expenses, is even less compared with the hospital visit fee. For example, not considering physician time and transportation costs to the hospital, the after expense value of the Medicare specialist follow-up office visit fee is \$5.90 (60 percent of \$9.80)

compared with \$11.10 for the follow-up hospital visit--a difference of 88 percent. Even adjusting for the longer time to perform a follow-up hospital visit 17/, there is a 57 percent difference between the hospital visit fee and the net value of the office visit fee.

Second, table 3 also contains data on the average annual rates of change in Medicare reimbursement rates from 1968-1975 by place of service. Over this period, Medicare reimbursement rates for services rendered in the hospital compared with the doctor's office increased more than two and one-half times as fast as services rendered in the doctor's office. While this result might be attributable to changes in the mix of services, the relative rates of increase are indicative of incentives favoring in-hospital treatment.

Some evidence suggests that Medicare and Medicaid reimbursement policies reward surgical procedures more generously than medical visit services. Table 5 contains hourly equivalent Medicare and Medicaid specialist remuneration rates for several medical visit and surgical procedures (i.e., adjusted for physician time to perform the procedure). 18/ Using only operating room time data for five surgical procedures, Medicare fees translate into an equivalent of \$197 per hour for surgery compared with \$50 per hour for medical visits. Similarly, under Medicaid, the five surgical procedures average \$143 per hour compared with \$37 per hour for medical visits. Assuming these procedures represent hourly fee patterns for all surgery and all medical visits, and assuming that physicians of a given specialty can substitute the performance of surgery and medical visits, these results suggest that surgical

procedures are about four times more lucrative than medical visits for both Medicare and Medicaid. However, this comparison overstates the relative profitability of surgical procedures because the reimbursement rate for surgery generally includes not only the operation itself but also pre- and post-operative hospital visits and post-hospital office visits within a specified period of time. Adjusting to include both operating room time and time for pre- and post-operative hospital and office visits, 19/ results in surgical procedure reimbursement 32 percent higher under Medicare and 30 percent higher under Medicaid than for performing medical visits.

Preliminary results from a study of the resource costs of various medical and surgical procedures by Stason and Hsiao substantiate these findings. Even after adjusting for several factors, Stason and Hsiao found hourly surgical reimbursement exceeds by several times hourly reimbursement for medical visits. 20/ Much more work needs to be done on this subject, including studying a larger number of procedures and developing better measures of the intensity and skill required to perform surgical and medical procedures. However, preliminary evidence suggests that the current Medicare and Medicaid reimbursement rates give physicians financial incentives to perform surgery as compared with medical visits where procedures can be substituted. 21/ However, since Medicare and some Medicaid physician reimbursement methods are based on existing private market fee structures, they may only reflect fee patterns inherent in the overall health system.

### Summary

The study used selected physician reimbursement data from Medicare and

Medicaid program experience to analyze the nature and direction of the incentives contained in these programs and their effects on several important public policy issues. Implicit in the discussion was the basic economic assumption that prices affect physician behavior. However, given the limited nature of the data (e.g., Medicare and Medicaid) and the lack of behavioral relationships, the discussion has concentrated only on the empirically observed direction of the relationships.

The results from this analysis suggest several hypotheses. First, the CPR physician reimbursement method employed by Medicare, Medicaid, and many private insurers is inherently more inflationary than fee schedules. Second, Medicare beneficiaries appear to have about the same financial access to care as Blue Shield subscribers, but Medicaid patients are at a distinct disadvantage. Moreover, physician participation in public programs appears to be highly responsive to reimbursement levels. Third, Medicare and, to a lesser extent Medicaid, would appear to provide financial incentives for physicians to locate in high-income, physician-dense metropolitan areas and to choose specialty over primary care practice. Fourth, Medicare and Medicaid may also provide incentives for physicians to treat patients in hospital settings and to perform surgical, as opposed to medical visit, procedures.

Given that the customary, prevailing and reasonable charge system was designed to reflect the private market and that it operates essentially as a physician-determined reimbursement system, these results are not surprising. However, if national health insurance is to use the reimbursement system to promote

cost containment and access to care as policy goals, then this analysis suggests that our predominantly laissez-faire reimbursement system will need to be modified.

### Acknowledgements

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### Footnotes

- 1/ See M.A. Redisch, "Physician Involvement in Hospital Decision Making," in M. Zubkoff, I. Raskin and R. Hanft, Hospital Cost Containment: Selected Notes for Future Policy, (New York: 1978); and J. R. Gabel and M. A. Redisch, "Alternative Physician Payment Methods: Incentives, Efficiency, and National Health Insurance," Milbank Memorial Fund Quarterly/Health and Society, 57, 1 (Winter 1979).
- 2/ Medicare establishes technical definitions of customary and prevailing charges. The customary charge for a given procedure in the current fiscal year is the physician's median billed charge for that procedure during the previous calendar year. The prevailing charge is the 75th percentile of the distribution of all physicians' customary charges in the local area weighted by the number of times each physician billed for that specific procedure.
- 3/ See F. Sloan and B. Steinwald, "The Role of Health Insurance in the Physician Services Market," Inquiry, 10, 4 (December 1975); United States Department of Health, Education, and Welfare, Social Security Administration, A Report on the Results of the

Study of Methods of Reimbursement of Physicians' Services Under Medicare, (SS Publication No. 92-73, (10-73), Washington, D.C., July, 1973); J. Holahan, "Physician Availability, Medical Care Reimbursement, and Delivery of Physician Services: Some Evidence From the Medicaid Program," Journal of Human Resources, X, 3 (Fall 1975); Z. Dyckman, A Study of Physicians' Fees, Council on Wage and Price Stability, (Washington: 1978); J. Holahan, J. Hadley, W. Scanlon, R. Lee and J. Bluck, "Paying for Physician Services Under Medicare and Medicaid," Milbank Memorial Fund Quarterly Health and Society, 57, 2, (Spring, 1979).

- 4/ As discussed below, this potential has been mitigated to a certain extent by the application of an Economic Index that limits the annual rate of increase in Medicare and Medicaid prevailing charges.
- 5/ For example, these situations have been observed in certain provinces in Canada following the establishment of negotiated fee schedules for the National Health Insurance program. Although the composite Canadian physician fee index increased only 3.7 percent per year between 1969 and 1971, physicians' net incomes increased by 27.0 percent and per capita expenditures by 33.5 percent per year during that period. While some of this increase is due to payment for services that previously were written off as bad debts, Lewin and Associates, Government Controls on the Health Care Systems: The Canadian Experience, HEW-OS-74-177, (Washington, D.C.: January, 1976) observed that

there is a growing feeling that "many Canadian physicians have been increasingly manipulating the services they provide in light of the nature of the fee schedule in order to achieve their income goals."

- 6/ F. Sloan, J. Cromwell and J. B. Mitchell, A Study of Administrative Costs in Physicians' Offices and Medicaid Participation, Final Report, Health Care Financing Administration, June 1977.
- 7/ However, to the extent that the cost-sharing requirements in Blue Shield plans are less extensive than those in Medicare, the net value of the fee may be greater under Blue Shield since physicians' bad debt experience may be lower.
- 8/ I. L. Burney, G. J. Schieber, M. O. Blaxall, and J. R. Gabel, "Geographic Variation in Physicians' Fees: Paying the Physician Under Medicare and Medicaid," J Am Med Assn, 240, 13 (September 22, 1978).
- 9/ Further analysis of data collected by Sloan et al., op. cit.
- 10/ L. Paringer, "The Medicare Assignment Rates of Physicians: Their Responses to Changes in Reimbursement Policy," Contract No. 600-76-0054, Health Care Financing Administration, March 1979.
- 11/ Sloan et al., op. cit., p. 205-244; J. Hadley and R. Lee, "An Econometric Analysis of Physician Participation in the Medicaid Program," Contract No. 600-76-0054, Health Care Financing Administration, April 1978; P. J. Held, L. M. Manheim, and J. Wooldridge, "Physician Acceptance of Medicaid Patients," Mathematica Policy Research Staff Paper SP-788-02, August 30, 1978.
- 12/ Medicare and Medicaid Reimbursement Policies, (Washington, D.C.: Institute of Medicine and the National Academy of Sciences, March 1976) p. 229.
- 13/ I. Burney and J. Gabel, "Reimbursement Patterns under Medicare and Medicaid," Conference on Research Results from Physician Reimbursement Studies, Health Care Financing Administration, February 1978; I. Burney et al., op. cit.
- 14/ Similar results were obtained for general practitioners. Medicaid results may be due to the use of State-wide areas for reimbursement purposes.
- 15/ See C. Berry, R. Freiden, P. Held, and J. Wooldridge, "Abstract from Report on the Physician, Capacity Utilization Telephone Surveys," unpublished paper, (Princeton: Mathematica, Inc., May 1976); M. S. Blumberg, "Physician Visits Per Week and Price Per Visit," unpublished paper, April 25, 1977; and J. R. Cantwell, "A Cross Sectional Econometric Analysis of Physician Location and Pricing," paper presented at the Midwestern Economic Association (April 1976).
- 16/ G. J. Schieber, I. L. Burney, J. B. Golden, and W. J. Knaus, "Physician Fee Patterns Under Medicare: A Descriptive Analysis," New Engl J Med 294, 1089 (May 13, 1976).
- 17/ Medical visit times are from U. E. Reinhardt, Physician Productivity and the Demand for Health

Manpower: An Economic Analysis  
(Cambridge, Massachusetts:  
Ballinger Publishing Company,  
1975) p. 157.

Resource Costs," Contract No.  
600-76-0058, Health Care  
Financing Administration,  
January 31, 1979.

18/ Operating room times were obtained from E. F. X. Hughes, V. R. Fuchs, J. E. Jacoby and E. M. Lewitt, "Surgical Workloads in a Community Practice," Surgery, 71, 317, (Mar. 1972) for five surgical procedures common to both the Medicare and Medicaid fee surveys and Hughes et al. Hourly equivalent fees were calculated by converting the operating room times into hours (e.g., 89.4 minutes = 1.49 hours) and dividing national average Medicare and Medicaid fees for the procedures by the hourly operating room time. The same methodology was used with medical visit times from Reinhardt, op. cit., to calculate hourly equivalent medical visit fees.

21/ See M. S. Blumberg, "Rational Provider Prices: An Incentive for Improved Health Delivery," in G. K. Chacko, ed., Health Handbook, 1978 (Amsterdam, The Netherlands: 1978) for similar results.

19/ One pre-operative hospital visit, one post-operative hospital visit per day and one bi-weekly post hospital discharge visit up to the total period of care specified in the procedure coding manual of the California Medical Association, 1964 Relative Value Study (San Francisco, California, 1964) was used. Medicare lengths of stay data come from U.S. Social Security Administration, Office of Research and Statistics, Medicare Health Insurance for the Aged, 1970: Length of Stay by Diagnosis, (Washington, D.C., 1973).

20/ W. B. Stason and W. C. Hsiao, "Toward Developing a Relative Value Scale For Medical and Surgical Services Based on

Table 1

## MEAN PHYSICIAN AND INSURER FEES, 1975

(in dollars)

	PHYSICIANS		INSURERS	
	Usual Fee	Blue Shield "Best Fee"	Medicare Fees	Medicaid Fees
Follow-up Hospital Visit on Day After Patient is Admitted	\$ 13.93	\$ 10.73	\$ 10.00	\$ 7.63
Routine Follow-up Office Visit	11.59	9.22	8.79	7.20
Inguinal Hernia Repair	303.97	244.82	233.21	170.57
Diagnostic Dilatation and Curretage	149.06	113.97	104.43	76.72
Complete Blood Count	8.04	7.79	6.17	5.63
Suture of a Simple Laceration	22.26	19.04	16.55	13.68
Electrocardiogram	19.66	17.05	15.76	13.47

Source: Sloan et al., A Study of Administrative Costs in Physician's Offices and Medicaid Participation, Final Report, Health Care Financing Administration, June 1977.

Table 2

MEAN AND RANGE FOR MEDICARE AND MEDICAID  
SPECIALIST FEE INDICES BY COUNTY PHYSICIAN  
POPULATION RATIO AND COUNTY PER CAPITA  
INCOME, 1975

	Number of Counties	Medicare		Medicaid	
		Mean	Range	Mean	Range
All Counties	3074	100	70-192	100	49-179
<hr/>					
<u>Physicians Per 100,000 Population (1973)</u>					
/ 24	314	85	71-126	108	61-145
25-74	1,747	85	70-126	101	49-154
75-124	704	82	70-132	99	49-179
125-174	182	102	71-154	103	49-142
175-224	70	113	75-154	102	49-150
225-299	25	110	77-154	94	49-134
300+	32	113	80-192	90	49-145
<hr/>					
<u>Per Capita Income (1970)</u>					
/ \$2,499	628	83	70-103	101	61-142
\$2,500-\$2,999	877	83	70-113	102	49-145
\$3,000-\$3,499	874	87	70-117	100	49-145
\$3,500-\$3,999	479	99	70-154	98	49-154
\$4,000-\$4,499	153	100	75-154	101	49-145
\$4,500+	63	121	75-192	100	49-179

Source: Medicare Carrier Survey, Intermediary Letter 74-19, June, 1974;  
Medicaid State Survey, SRS Action Transmittal 75-25, June, 1975.

Table 3

AVERAGE ANNUAL RATES OF GROWTH OF MEDICARE REASONABLE  
CHARGES BY SPECIALTY AND BY PLACE OF SERVICE, FOR  
SELECTED YEARS, 1968-1975

(per cent)

	1968 to 1972	1972 to 1975	1968 to 1975
<u>Specialty</u>			
All Physicians	5.4	7.3	6.2
All Specialists	5.8	7.8	6.7
General Practitioners	3.0	4.7	3.7
Internal Medicine	4.2	5.9	4.9
General Surgery	7.8	5.3	6.7
<u>Place of Service</u>			
All Places	5.4	7.3	6.2
Doctor's Office	4.1	2.4	3.4
Inpatient Hospital	7.1	12.2	9.3

Source: Unpublished preliminary data from Medicare 5 percent sample of beneficiary claims.

Table 4

## MEDICARE AND MEDICAID NATIONAL AVERAGE MEDICAL VISIT FEES, 1975

(in dollars)

Procedure	Medicare General Practitioner	Medicare Specialist	Medicaid General Practitioner	Medicaid Specialist
Initial Office Visit	\$29.00	\$36.60	\$23.00	\$26.20
Follow-up Office Visit	8.20	9.80	7.20	7.80
Initial Hospital Visit	34.70	42.40	26.30	30.50
Follow-up Hospital Visit	9.90	11.10	7.70	8.00
	<u>Ratios</u>			
Initial Visit: Hospital/Office	1.20	1.16	1.14	1.16
Follow-up Visit: Hospital/Office	1.21	1.13	1.07	1.03

Source: See table 2; National average fees are county fees weighted by county population relative to U.S. population.

Table 5

MEDICARE AND MEDICAID SPECIALIST MEAN FEES  
PER HOUR FOR SELECTED PROCEDURES, 1975

PROCEDURE	OPERATING ROOM (OR) TIME			TOTAL TIME*		
	OR Time	Medicare Fee Per Hour	Medicaid Fee Per Hour	Total Time (hrs)	Medicare Fee Per Hour	Medicaid Fee Per Hour
<u>Surgical Procedures</u>						
Hernia Repair	1.47	\$193	\$142	4.43	\$64	\$47
Appendectomy	1.33	225	165	5.62	53	39
Cholecystectomy	2.44	186	140	7.19	63	48
Radical Mastectomy	3.00	188	134	7.26	77	55
Colectomy	3.31	194	135	8.84	73	51
Average		\$197	\$143		\$66	\$48
<u>Medical Visit Procedures</u>						
Initial Office Visit	0.77	\$48	\$34			
Follow-up Office Visit	0.19	52	42			
Initial Hospital Visit	0.84	51	36			
Follow-up Hospital Visit	0.22	50	36			
Average		\$51	\$37			
					Fees Per Hour Ratio: Surgical to Medical Visit Procedures	
					Medicare	Medicaid
				OR TIME	3.94	3.86
				Total Time	1.32	1.30

\*Total time = operating room time plus time for medical visits.

Source: See table 2 for fees; Medical visit times from U. E. Reinhardt, Physician Productivity and The Demand for Health Manpower: An Economic Analysis (Cambridge, Mass: Ballinger Publishing Co., 1975, p. 157. Operating room times are from E. F. X. Hughes, V. R. Fuchs, J. E. Jacoby, E. M. Lewitt, "Surgical Workloads in a Community Practice," Surgery, 71, 317, (March, 1972)