Effects of selected fee schedule options on physicians' Medicare receipts

by Sandra Christensen

The Congress has indicated interest in modifying the system by which Medicare pays for physicians' services, and implementation of a Medicare fee schedule may be the most feasible change in the near term. In this article, the effects on physicians' Medicare receipts of a variety of fee schedules are simulated using 1984 Medicare claims data for a nationally representative sample of physician practices. The results show that reasonable choices concerning specialty and geographic differentials would shift payments away from surgical specialists and urban areas toward generalists (general practitioners, family practitioners, and internists) and less urban areas.

Introduction

Medicare sets payment rates for most physicians' services on a fee-for-service basis using the customary, prevailing, and reasonable (CPR) system. (This is called the usual, customary, and reasonable method by private insurance companies that use it.) Under this system, Medicare's approved charge for each service is set at the lowest of four alternative rates:

- Physician's submitted charge (billed amount).
- Physician's customary charge, defined as the physician's median charge for that service during the previous year.
- "Unadjusted" prevailing charge for that service in the locality, defined as the 75th percentile of the distribution of customary charges for all physicians in the locality.
- "Adjusted" prevailing charge, defined as the prevailing charge applicable in June 1973, inflated by an index of earnings and office expenses called the Medicare Economic Index (MEI).

There is widespread dissatisfaction with the CPR system. It is faulted because it provides little control over payment rates and no control over the volume of services provided. In addition, it is a complex system that is difficult for patients to understand. Critiques of the CPR system are contained in studies by the Congressional Budget Office, U.S. Congress (1986), the Office of Technology Assessment, U.S. Congress (1986), and Holahan and Etheridge (1986). The simulation results presented in this article are extracted from Appendix B of the Congressional Budget Office study (1986).

In response to this dissatisfaction, the Congress appears to be headed toward implementation of a Medicare fee schedule. In the Consolidated Omnibus Budget Reconciliation Act of 1985 (Public Law 99-272), the Secretary of the Department of Health and Human Services was instructed to develop a relative value scale (RVS), which would give each service a weight to indicate its value relative to any other service. In the Omnibus Budget Reconciliation

Act of 1986 (Public Law 99-509), the Secretary was further instructed to develop a geographic index for measuring differences by location in the cost of providing physicians' services. These two elements, an RVS together with a geographic index of costs, would provide the foundation for a nationwide fee schedule with rates that would vary by location to reflect geographic cost differences.

The CPR system is evolving toward a set of location- and specialty-specific fee schedules anyway, as an increasing proportion of claims is affected by the payment ceilings set by MEI-adjusted prevailing fees. The growing importance of the MEI, rather than physicians' charges, in determining annual increases in payment rates means that the incentives for fee inflation inherent in the CPR system are being weakened, but this is occurring very slowly. In 1984, only 55 percent of allowed amounts were set by prevailing charges (Table 1), and less than one-half were set by MEI-adjusted prevailing charges. Estimates by the Congressional Budget Office, U.S. Congress (1986) indicate that, even by 1991, more than one-quarter of all charges will be set by physician-specific customary or billed amounts rather than by prevailing fees, and only 56 percent of charges will be set by MEI-adjusted prevailing fee screens. Further, because MEI-adjusted prevailing fees simply inflate Medicare's prevailing fees for 1973 (which were based on actual charges during 1971) by the increase in the index since that time, a fee schedule based on MEI-adjusted prevailing fees will reflect the structure of charges in 1971. It is unlikely that rate differentials appropriate in 1971 are still appropriate now. Hence, active implementation of a fee schedule may be preferable to passively accepting the rate structure that evolves from the CPR system.

In this article, selected alternatives for defining a Medicare fee schedule are examined, and simulated effects on physicians' receipts are presented. In the next two sections, the data sources and methods used for the simulations are described. Then results of the simulations and comparisons with results from previous studies are presented. In the final section, some implications for Medicare's payment policies are discussed.

Table 1

Percent of physicians' allowed amounts and services billed that would be constrained by alternative fee screens, by physician practice specialty and location: United States, 1984

Physician practice specialty and location	Fee screen used to set payment					
	Billed amount	Customary screen	Prevailing screen[1]	Billed amount	Customary screen	Prevailing screen[1]
	Percent of allowed amounts			Percent of services billed		
Total[2]	14.5	30.4	55.1	17.4	31.4	51.2
Specialty						
Generalists:						
General practice	23.6	27.8	48.6	22.0	26.7	51.3
Family practice	19.3	27.7	53.0	18.7	24.4	56.9
Internal medicine	15.5	29.7	54.8	15.4	27.4	57.2
Specialists:						
Nonsurgical[3]	17.3	37.3	45.4	18.1	38.0	43.9
Surgical[4]	10.7	29.3	60.0	16.6	39.4	44.0
Location						
Nonmetropolitan	19.5	23.3	57.2	19.8	19.3	60.9
Metropolitan	13.7	31.4	54.9	16.8	34.3	48.9

[1] Includes the unadjusted prevailing, adjusted prevailing, and lower ceilings set by "inherently reasonable" criteria or by Health Care Financing Administration (HCFA) regulations. HCFA regulations specify that payment rates for certain medical and radiology services rendered in hospitals not exceed specified percentages of the prevailing fees for those services when rendered in physicians' offices. Further, clinical laboratory fees are set by fee schedules.
[2] Includes claims submitted for the 258 top-ranked services (based on total allowed amounts) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.
[3] Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.
[4] Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

Data sources

Four data sources were:

- The 1984 Part B Medicare Annual Data procedure file (from the Health Care Financing Administration), used to define nationwide relative value scales.
- The prospective payment system's hospital wage index (from the Health Care Financing Administration), used as a county-level geographic cost index.
- The 1985 area resource file (from the Health Resources and Services Administration), used to distinguish urban from nonurban pay localities based on the location of the majority of physicians in the locality[1] and to create cost indexes from the prospective payment system (PPS) wage index for geographic areas larger than counties by calculating physician-weighted averages of the county-level index values.
- The 1984 Part B Medicare Annual Data provider file (from the Health Care Financing Administration), used as the data base for the simulations.

The nationwide RVS's used for the simulations were based on average billed amounts for all Medicare claims in carrier jurisdictions in 1984. These rates

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[1] Throughout this article, urban-nonurban is equivalent to metropolitan-nonmetropolitan; a metropolitan area is one defined as a metropolitan statistical area by the U.S. Bureau of the Census.

were calculated from the 1984 Part B Medicare Annual Data procedure file from the Health Care Financing Administration (HCFA), which contains charge information for all services billed to Medicare. Although rates could, in principle, be based on average allowed amounts instead, this was not done because reporting errors made the calculation of the number of times a given service was paid for by Medicare suspect for nearly 95 percent of the charges recorded on the procedure file.

Of the 56 carriers nationwide, 15 carriers (Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York, North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands) were eliminated because of various problems in reporting the data. The remaining 41 carriers processed claims representing about two-thirds of Medicare's allowed amounts for 1984. Overall, the counties in the carrier jurisdictions that were used were very similar to the national average in the proportion that were urban, in wage levels (as measured by the PPS hospital wage index), in poverty rates, and in per capita income. By census region, however, the jurisdictions excluded in the East were more urban and those excluded in the other census regions were less urban than those included in the analysis.

The simulations of effects on physicians' receipts were derived from a 1-percent sample of physician practices in the 41 jurisdictions. All 1984 Medicare claims submitted by the physician practices included

in the sample are reported. Claims for the services of radiologists, anesthesiologists, and pathologists were eliminated because of difficulties in establishing appropriate payment rates per unit of service for these specialties. Claims by pediatricians, psychiatrists, and osteopathic physicians were also eliminated because so few services were provided to Medicare enrollees by these groups.

To reduce computation costs, only the top 258 services (ranked by total allowed amounts in 1984) were used in the analysis. These services accounted for 70 percent of approved charges, after eliminating claims for which the service codes in HCFA's common procedure coding system (HCPCS) had modifiers attached. (Carriers use modifiers to indicate a range of special circumstances associated with the claim.) Only allowed claims for services reported without modifiers were used, in an effort to ensure that a homogeneous set of services was described by a given HCPCS code. These services accounted for 80 percent of all Medicare charges for generalists, 68 percent for nonsurgical specialists, and 62 percent for surgical specialists. Because all effects are presented as percent changes from current amounts, this variation by specialty in the proportion of total allowed amounts accounted for by the 258 services should not distort the results so long as the services used are representative for each specialty. Summary

information about the data base is shown in Table 2.

The national claims data base used here permits some advance over previous studies of physicians' fees, in which researchers had to rely on analysis of claims data from single carriers. Because of the broad national representation in the data base, the simulated effects of specific payment changes under Medicare by physician specialty and by urban-rural location are more likely to be an accurate representation of what would happen, on average, nationwide from Medicare policy changes. Because of the exclusion of several large carriers, however, the simulated effects on physicians by region are misleading. Consequently, effects are not reported by region.

Using a national data base in which claims records from different Medicare carriers are combined has some disadvantages. Because there may be systematic differences among the carriers in how claims information is recorded, simulation results may in some cases be misleading. For example, in most carrier regions, services for 1984 were not reported using HCPCS. Instead, carriers translated the services reported using other coding systems into HCPCS. It is uncertain how consistent the translations were from one carrier to another. In addition, even if services were reported in HCPCS, physicians differ in how they code given services. This is especially so for the visit codes, which are poorly defined.

Table 2
Physicians' practice receipts and patients' liabilities, by physician practice specialty and location: United States, 1984

| Physician practice specialty and location | Number of practices in sample | Current receipts per practice | | | Patients' liabilities per service[4] |
		Medicare-allowed amounts[1]	Revenue from Medicare patients[2]	Revenue from all patients[3]	
Total[5]	1,952	$32,164	$36,403	$105,812	$15
Specialty					
Generalists:					
General practice	348	14,816	17,111	54,821	10
Family practice	192	19,384	22,130	84,376	10
Internal medicine	398	39,099	44,981	90,417	11
Specialists:					
Nonsurgical[6]	250	37,885	41,873	143,138	16
Surgical[7]	764	37,792	42,519	130,230	27
Location					
Nonmetropolitan	283	27,892	32,637	92,205	10
Metropolitan	1,669	32,888	37,042	108,119	16

[1] Medicare reimbursements are 74 percent of allowed amounts, on average. Reimbursements reported on the 1984 Medicare annual data files are not reliable.
[2] Medicare-allowed amounts on assigned claims; billed amounts on unassigned claims. It is assumed that patients pay their share in full.
[3] Estimates based on average Medicare reimbursements as a share of average practice income by specialty. This is income per practice (as identified by Medicare carriers), not per physician. A practice may include more than one physician, and physicians may receive income from more than one practice.
[4] Average patient out-of-pocket expenses per service rendered, including deductible amounts, coinsurance on allowed amounts, and balance billing.
[5] Includes claims submitted for the 258 top-ranked services (based on total allowed amounts in 1984) for all physicians in the sample except pediatricians, psychiatrists, osteopaths, radiologists, anesthesiologists, and pathologists. Data from 15 of the 56 Medicare carriers were excluded because of various reporting problems. The excluded carriers were for Georgia, Iowa, Michigan, eastern Missouri, Montana, New Jersey, eastern New York (the New York City area), North and South Carolina, North and South Dakota, Texas, Utah, Puerto Rico, and the Virgin Islands.
[6] Includes allergy, cardiology, dermatology, gastroenterology, nephrology, neurology, physical medicine, and pulmonary disease.
[7] Includes general surgery, otolaryngology, neurosurgery, gynecology, ophthalmology, orthopedic surgery, plastic surgery, colon and rectal surgery, thoracic surgery, and urology.
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

Because the results are obtained from a sample of providers, not enrollees, it is possible to assess the impact on practice receipts. (Receipts from all patients were not reported on the Medicare files, but estimates were obtained using average Medicare reimbursements as a share of practice income by specialty, reported by Owens, 1983, in *Medical Economics*.) However, the impact on patients' total liabilities—the deductible amount, coinsurance on approved charges, and balance billing—could not be assessed. (Balance billing is the excess of a physician's fee over Medicare's allowed amount on unassigned claims; on assigned claims, the physician bills Medicare directly and agrees to accept Medicare's allowed amount as the fee.) Although information is presented in the tables about the impact of each option on Medicare patients' liabilities per service, these effects are not discussed.

The simulated results may understate the impact of a fee schedule on receipts from Medicare patients and on receipts from all patients, and probably overstate the impact on patients' liabilities, because assignment rates reported in the 1984 data (52 percent) are below those currently reported for physicians' services to Medicare enrollees (65 percent). There are two reasons for the relatively low assignment rates in the data. First, whether assignment was accepted was not reported for about 11 percent of approved charges in the data. All of these charges were treated as unassigned claims, although some of them were probably assigned. Second, assignment rates have increased sharply since 1984 because of Medicare's participating physician program, in which physicians are given incentives to accept assignment.

Methods

A number of choices must be made in constructing a fee schedule, including:

- What coding system to use to identify different services.
- What relative value scale to use.
- What physician specialty groups to differentiate.
- What geographic areas to identify for rate differentials.

In this article, services are identified by HCFA's common procedure coding system, which is now used nationwide for Medicare Part B claims. As discussed earlier, the RVS's used are nationwide and charge based. Alternatives might be based on resource costs or on consensus judgments by a panel of experts. However, in their study, Hadley et al. (1984) concluded that the most feasible way to construct an RVS would be to use a combination of these approaches; that is, to start with the current charge structure and "back into" an appropriate schedule of rates by making selective adjustments based on consensus by a panel of experts as to which services would be inappropriately priced at current rates. If this were done, the effects found for the charge-based fee schedules used in this study would be reasonably

representative. A discussion of RVS's based on resource costs can be found in Hsiao and Stason (1979). The first-order effects of some, by no means all, alternative choices for defining differentials by specialty and by location are simulated in the next section.

The simulations are static in that they assume unchanged behavior by physicians and their patients. Hence, the results are indicative of the initial financial effects of the alternative options, which might then be modified by behavioral responses, such as changes in assignment or in use of services. Further, it is assumed that all patient liabilities are paid in full; that is, results are shown for the effects on accounts receivable, not on collections, for each physician practice.

All of the options are designed to be budget neutral nationwide, at least in their first-order effects; that is, aggregate Medicare costs nationwide would be unchanged by the payment rates (barring behavioral responses), although the distribution of payments across practices would change. In some instances, the options were also designed to be budget neutral for each State or pay locality.

The simulation methods are best described algebraically.[2] An illustrative example, statewide fee schedules that would vary across States based on costs with no specialty differentials, is shown here. For this example, the new payment rate for any given service code is defined as the product of three elements:

- The base fee, which equals the nationwide average billed amount (ABA) for the service.
- The State cost index (COSTINDEX), which shows the average value of the PPS wage index across counties in the State relative to the nationwide average (with averages weighted by the number of physicians in each county).
- A monetary multiplier (M) designed to achieve nationwide budget neutrality, where M = (nationwide sum of allowed amounts for all services)/(nationwide sum of

ABA*COSTINDEX*frequency for all services).

Hence,

$$NEWFEE (I,J,K) = ABA(I)*COSTINDEX(J)*M,$$

where I denotes the service code to which the fee applies; J denotes the geographic area (here, the State); and K denotes the physician specialty (here, all specialties). COSTINDEX(J)*M gives the location-specific monetary multipliers referred to in the next section.

Simulation results

A budget-neutral statewide fee schedule with no specialty differentials is the only alternative that has been examined in previous studies, each of which was limited to simulations from Medicare claims data for

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[2]Algorithms for all options are available from the author on request.

a single State. In previous studies, data from California, South Carolina, and Washington State were used. In those studies, as here, the simulations were designed to be budget neutral in the area examined in order to isolate the effects of changing the rate structure without the added complication of a change in total payment amounts. A summary of results for all three States is contained in Juba (1985). A more detailed discussion of the results for California is contained in the chapter by Moon in Holahan and Etheridge (1986). To facilitate comparison with previous studies, the same kind of fee schedule is the starting point for the simulations done here. Later, variations in both specialty and geographic differentials are examined.

Even for the initial simulation, the results obtained here are not strictly comparable with previous work. The simulations are for a national sample of claims rather than for a single carrier's claims. Moreover, the RVS's used here are based on average billed amounts, whereas average allowed amounts were used to define the RVS in previous work. Because there are small but systematic differences (by specialty and by type of service) in the extent to which billed amounts are reduced by Medicare, some of the differences between the results shown here and the findings in previous studies are caused by the use of billed amounts to define the RVS. (An RVS based on average allowed amounts could not be reliably calculated, as explained previously.)

The results obtained here by specialty are generally consistent with those obtained previously. Average receipts would increase for generalists at the expense of surgical specialists. Allowed amounts would increase by an average of 13 percent for general and family practitioners but would fall by nearly 5 percent for surgical specialists (Table 3). Even though generalists would gain substantially on average, about 10 percent of general and family practitioners would lose 10 percent or more in allowed amounts under this option, and nearly 30 percent of internists would be so affected. (Only the unweighted percentages of practices that would gain or lose 10 percent or more in Medicare's allowed amounts are shown in Table 3. Results were also obtained for practices weighted by allowed amounts for each practice, with similar findings.)

The effects on physicians' revenues from Medicare patients would generally be smaller, because physicians' revenues from unassigned claims would not be affected by changes in Medicare's payment rates. Revenues from all patients would change by less than 2 percent, on average, because Medicare patients account for only a portion (about 20 percent) of physicians' gross receipts.

One way in which the results of these simulations differ from those reported in previous studies is that internists would gain along with general and family practitioners, although to a lesser extent. In previous studies, it was found that allowed amounts for internists would fall by about one-half as much (in percents) as general and family practitioners would gain. For example, analysis by the Congressional Budget Office of claims data for Washington State indicated that, if a statewide fee schedule based on average allowed amounts were implemented, internists' allowed amounts would fall by 3.8 percent, and allowed amounts for general and family

Table 3

Effects of statewide fee schedules with no specialty differentials, budget neutral by State, by physician practice specialty and location: United States, 1984

| Physician practice specialty and location | Medicare-allowed amounts | Revenue from Medicare patients | Revenue from all patients | Patients' liabilities per service | Practices for which Medicare-allowed amounts would— | | |
					Increase by 10 percent or more	Change by less than 10 percent	Fall by 10 percent or more
	Percent change					Percent	
Total	0.0	0.0	0.0	−0.1	33.7	41.6	24.7
Specialty							
Generalists:							
General practice	13.4	5.5	1.7	−5.7	53.0	36.9	10.1
Family practice	12.8	6.3	1.7	−3.9	52.1	37.5	10.4
Internal medicine	1.2	1.0	0.5	0.2	25.4	44.7	29.9
Specialists:							
Nonsurgical	−0.4	0.9	0.3	2.2	30.8	40.0	29.2
Surgical	−4.6	−2.8	−0.9	0.8	25.5	43.8	30.7
Location							
Nonmetropolitan	9.2	5.1	1.8	0.4	46.6	36.0	17.3
Metropolitan	−1.3	−0.8	−0.3	−0.2	31.5	42.6	25.9

NOTE: Definitions of terms used in this table are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

Table 4
Physician specialty groups and specialty-specific multipliers: United States, 1984

Group	Requirements for board eligibility	Specialty-specific multiplier[1]
General practice	No board certification available. States require 1 or 2 years of residency training to practice.	1.00
Family practice	3 years graduate medical education in a mix of specialties.	1.07
General internal medicine	3 years graduate medical education in internal medicine.	1.07
Dermatology, neurology, physical medicine, otolaryngology, gynecology, ophthalmology	4 years graduate medical education in specialty selected.	1.14
Allergy, cardiovascular disease, gastroenterology, pulmonary disease, nephrology, general surgery, orthopedic surgery, plastic surgery, urology	5 years graduate medical education in specialty selected.	1.22
Neurosurgery, colon and rectal surgery	6 years graduate medical education in specialty selected.	1.31
Thoracic surgery	7 years graduate medical education in specialty selected.	1.40

[1] Used to adjust the relative value scale to obtain differential payment rates by specialty.

SOURCE: Based on information from: American Board of Medical Specialties: Annual Report and Reference Handbook, 1984. Evanston, Ill. ABMS. 1984.

Table 5
Effects of statewide fee schedules with specialty-specific relative value scales, budget neutral by State, by type of differential and physician practice specialty and location: United States, 1984

					Practices for which Medicare-allowed amounts would—		
Physician practice specialty and location	Medicare-allowed amounts	Revenue from Medicare patients	Revenue from all patients	Patients' liabilities per service	Increase by 10 percent or more	Change by less than 10 percent	Fall by 10 percent or more
Specialty differentials for visits and consultations, no differentials for procedures	Percent change				Percent		
Total	0.0	−0.2	−0.1	−0.8	30.2	43.8	26.0
Specialty							
Generalists:							
General practice	4.1	1.5	0.5	−1.5	38.0	40.3	21.6
Family practice	−2.9	−1.2	−0.3	−0.1	24.0	45.8	30.2
Internal medicine	5.3	2.4	1.2	−2.9	31.2	48.2	20.6
Specialists:							
Nonsurgical	0.3	1.3	0.4	1.3	30.8	38.4	30.8
Surgical	−3.3	−2.2	−0.7	−0.2	27.6	44.2	28.2
Location							
Nonmetropolitan	7.3	4.0	1.4	1.6	36.7	44.9	18.4
Metropolitan	−1.1	−0.8	−0.3	−1.1	29.1	43.6	27.3
Specialty differentials for all services							
Total	0.0	−0.1	0.0	−0.8	30.4	43.5	26.1
Specialty							
Generalists:							
General practice	3.2	1.1	0.4	−1.2	36.3	40.3	23.3
Family practice	−3.6	−1.5	−0.4	0.4	24.0	45.8	30.2
Internal medicine	4.4	1.9	1.0	−2.5	29.6	49.0	21.4
Specialists:							
Nonsurgical	2.2	2.6	0.8	1.8	33.6	38.0	28.4
Surgical	−3.2	−2.1	−0.7	−0.7	28.6	43.3	28.1
Location							
Nonmetropolitan	7.0	4.0	1.4	1.7	36.4	45.6	18.0
Metropolitan	−1.0	−0.7	−0.2	−1.1	29.4	43.1	27.5

NOTE: Definitions of terms used in this table are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

practitioners would increase by 6.4 percent to 6.8 percent (reported in Juba, 1985, Appendix Table B1). Internists would fare better under a fee schedule based on billed amounts than one based on average allowed amounts because they would be paid relatively more for hospital visits (a large component of their service mix).

General and family practitioners might be paid more per hour than more highly trained specialists under this option. In a nationwide survey of medical practices conducted from 1975 through 1977, significant differences by specialty were found in the time physicians spent with patients during visits (Mendenhall, 1981). On average, general practitioners spent only three-quarters of the time spent by internists during a "limited" office visit, for example. If this remains true, paying the same fee to all physicians for a given type of visit would result in a higher rate of pay per unit of time for general practitioners than for internists and other specialists. In fact, general practitioners might currently be paid more per hour. Average allowed amounts nationwide for limited office visits by general practitioners are about 85 percent of average amounts allowed to internists for the same type of visit. If visits with general practitioners are still only about 75 percent as long as those with internists, then general practitioners are receiving a higher rate of pay per unit of time. If the HCPCS visit codes were redefined to reflect time, gains for general and family practitioners under a fee schedule with no specialty differentials would probably be substantially lower than those shown here, and gains for internists would probably be larger.

Variations on specialty differential

Seven specialty groups were used for the alternatives that would permit specialty differentials (Table 4). The groups were defined by the number of years of graduate medical education required to be board eligible, with one exception. By the education criterion, family practitioners and internists would be in the same group because both require 3 years of graduate medical education. These physicians were put in separate groups, though, because of the more general nature of the family practitioner's training, which involves a mix of internal medicine, pediatrics, and other specialties. If a fee schedule with specialty differentials were implemented, the definition of specialty groups and the differentials for each might depend not only on training time but also on such factors as whether certain specialties were in oversupply or undersupply and what differentials had been paid historically. Although some of the specialties in the two groups requiring 4 and 5 years of graduate medical education face different malpractice risks (depending largely on whether or not the specialty is surgical), these costs are more appropriately recognized in payment rates for specific services than in higher payment rates for all services provided by surgical specialties.

The carriers' designation of specialty, which is generally the result of self-designation by physicians, was used. Nearly one-half of physicians claiming a specialty are not certified in that specialty, though (American Medical Association, 1984). Far more physicians who currently bill as specialists would be adversely affected under the options that allow specialty differentials if all physicians without board certification in their specialty were paid the same rates as general practitioners. This alternative could not be analyzed, however, because the data used here do not indicate whether or not physicians are board certified.

Specialty differentials could be obtained in either of two ways: by defining a separate relative value scale for each specialty group (based here on average amounts billed nationwide by physicians in that group) or by applying specialty-specific multipliers to a relative value scale that was uniform across all specialties, in which the multipliers could be designed to reflect each specialty's training costs. Both of these alternatives are examined here, along with a third alternative by which CPR payment rates for visits and consultations would be retained (pending coding changes) while a fee schedule for procedures was introduced. In all cases, the resulting fee schedules are statewide and budget-neutral by State.

Specialty-specific relative value scales

Results were obtained for two variants of the specialty-specific relative value scale, one that would permit specialty differentials only for visits and consultations and one that would permit differentials for all services, including procedures (Table 5). Although results for options that would permit specialty differentials are quite different from the alternative with no specialty differentials, the two variants discussed in this section are similar. This is because only one or two specialties typically account for most of the claims for a given kind of procedure, so payment rates for procedures are effectively already specialty specific under the CPR system.

If specialty differentials were paid for visits and consultations based on each specialty group's billed amounts, the average increase in receipts for general practitioners would be smaller than if no differentials were paid, and the losses for surgical specialists would also be smaller. The increase in allowed amounts, for example, would be 4.1 percent for general practitioners under this option, compared with 13.4 percent under the option with no specialty differentials. The average decrease in allowed amounts for surgical specialists would be 3.3 percent under this option, compared with a decrease of 4.6 percent if no specialty differentials were paid. Internists, on the other hand, would experience bigger gains in receipts under this option than under one without specialty differentials, because their fees for visits would not be reduced to the lower average that would result from including fees charged by general and family practitioners.

Table 6

Effects of statewide fee schedules with specialty-specific multipliers, budget neutral by State (specialty differentials for visits and consultations, no differentials for procedures), by physician practice specialty and location: United States, 1984

| Physician practice specialty and location | Medicare-allowed amounts | Revenue from Medicare patients | Revenue from all patients | Patients' liabilities per service | Practices for which Medicare-allowed amounts would— | | |
					Increase by 10 percent or more	Change by less than 10 percent	Fall by 10 percent or more
Specialty differentials for visits and consultations, no differentials for procedures		Percent change				Percent	
Total	0.0	0.1	0.0	0.3	36.1	39.9	24.0
Specialty							
Generalists:							
General practice	7.9	3.1	1.0	-3.3	45.5	38.0	16.4
Family practice	13.5	6.7	1.8	-3.8	53.6	35.9	10.4
Internal medicine	1.2	0.9	0.5	-0.1	27.1	44.5	28.4
Specialists:							
Nonsurgical	3.5	3.5	1.0	1.7	39.6	36.8	23.6
Surgical	-5.0	-2.9	-0.9	1.5	31.0	40.3	28.8
Location							
Nonmetropolitan	8.7	4.9	1.7	1.1	45.9	36.4	17.7
Metropolitan	-1.3	-0.6	-0.2	0.2	34.5	40.4	25.1

NOTE: Definitions of terms used in this table are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

Table 7

Effects of statewide fee schedules for procedures only, budget neutral by State (customary, prevailing, and reasonable rates for visits and consultations, fee schedule for procedures), by physician practice specialty and location: United States, 1984

| Physician practice specialty and location | Medicare-allowed amounts | Revenue from Medicare patients | Revenue from all patients | Patients' liabilities per service | Practices for which Medicare-allowed amounts would— | | |
					Increase by 10 percent or more	Change by less than 10 percent	Fall by 10 percent or more
Customary, prevailing, and reasonable rates for visits and consultations, fee schedule for procedures		Percent change				Percent	
Total	0.0	-0.3	-0.1	-0.9	11.3	82.4	6.3
Specialty							
Generalists:							
General practice	1.2	0.1	0.0	-0.4	9.2	88.2	2.6
Family practice	1.6	0.4	0.1	-1.7	8.9	88.5	2.6
Internal medicine	1.0	0.2	0.1	-1.2	8.3	88.4	3.3
Specialists:							
Nonsurgical	3.3	2.5	0.7	-0.1	20.0	74.4	5.6
Surgical	-2.1	-1.6	-0.5	-0.9	11.6	77.6	10.7
Location							
Nonmetropolitan	1.1	0.2	0.1	2.1	14.8	80.6	4.6
Metropolitan	-0.2	-0.4	-0.1	-1.3	10.7	82.7	6.6

NOTE: Definitions of terms used in this table are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

Family practitioners would lose under this alternative, providing another example of an instance in which the choice between using billed amounts or allowed amounts to define the RVS significantly alters the results. Using allowed instead of billed amounts to define specialty-specific fee schedules would be more favorable to family practitioners, because Medicare's allowed amounts are typically a higher proportion of billed amounts for family practitioners than for other specialty groups.[3] Using specialty-specific multipliers applied to a single RVS would also be more favorable to family practitioners than this alternative would be, so long as the multipliers were directly related to years of graduate medical education, because family practitioners' payment rates would then be the same as those paid to internists. (This is discussed in the next section.)

Specialty-specific multipliers

The specialty-specific multipliers used here (and shown in Table 4) were designed to compensate physicians with specialty training for the costs of their extra years of medical education compared with general practitioners, who enter practice after 1 or 2 years of residency training. For each specialty group a multiplier was calculated that, if applied to the visit rates paid to general practitioners, increases the discounted earnings stream of the specialty group by just enough to compensate for the estimated costs of additional education. Consequently, the discounted value of the expected earnings stream for each specialty group would be identical to that expected for general practitioners, making medical students financially indifferent as to specialty training. Average stipends paid to residents in specialty training were obtained for 1983 from the Association of American Medical Colleges. Starting income for general practitioners for 1983 was obtained from the American Medical Association. A 3-percent real rate of discount was assumed. This methodology is discussed in Hsiao and Stason (1979).

The multipliers were applied to a single relative value scale based on average billed amounts for all physicians, but only for visits and consultations. No specialty differentials were permitted for procedures. Because current charges for procedures are used to define the relative value scale, the additional training costs of the specialties most likely to perform specific procedures are probably already incorporated to a large extent. Applying specialty-specific multipliers as well would therefore doubly compensate specialists for their training.

This option would differ from the alternative that would permit no specialty differentials primarily in the treatment of general practitioners and nonsurgical

specialists (Table 6). General practitioners would fare less well under this option than under one with no specialty differentials because they would be paid lower rates for visits and consultations, reflecting the absence of specialty training. Nonsurgical specialists would do better under this option because they would be paid above-average rates for visits, based on the costs of their additional medical education.

Under this alternative, unlike the option with no specialty differentials, it would be recognized that the services provided by specialists during a visit of a given type may be more skilled than those provided by general practitioners. Differences among physicians in how the visit codes are used would not be allowed for, though. Consequently, family practitioners might be paid more per hour under this option than internists, although their additional training costs are the same, because visits of a given type tend to be shorter with family practitioners than with internists.

Partial fee schedules (procedures only)

Another alternative would be to implement a fee schedule for procedures, delaying implementation of a fee schedule for visits and consultations until better definitions of those services have been developed. In the meantime, rates for visits and consultations could be based on the CPR system.

This option would have limited effects because physicians' receipts for visits and consultations, a substantial component of practice revenues for most physicians, would be unchanged. All generalists would gain a little (1.0 percent to 1.6 percent) in allowed amounts from higher rates for the procedures they perform. Gains would be higher for nonsurgical specialists than for generalists. Surgical specialists would experience a drop in revenues, on average. Overall, about 6 percent of practices would lose 10 percent or more in allowed amounts, with surgical specialties affected the most. Eleven percent of practices would gain 10 percent or more in allowed amounts, and about 82 percent of practices would experience either gains or losses that were less than 10 percent of allowed amounts. The effects on revenues from Medicare patients and from all patients would be much smaller, on average, than the effects on allowed amounts (Table 7).

Variations on geographic differential

A variety of choices for setting location-specific monetary multipliers are examined in this section, always for a fee schedule without specialty differentials. In the various alternatives examined here, multipliers are used that would:

- Not vary—a nationwide fee schedule.
- Vary by State—either to be budget neutral for each State or to be based on costs. (This budget-neutral option was previously examined in Table 3.)
- Vary by State and between urban and nonurban areas within each State—either to be budget neutral for each area or to be based on costs.

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[3]Family practitioners are classified with specialists rather than with general practitioners in many carrier jurisdictions. Where this is so, the payment rate ceilings they face are higher than those for general practitioners, although billed amounts are often similar for family and general practitioners.

Table 8

Effects of alternative location-specific multipliers for a fee schedule with no specialty differentials, by type of alternative and physician practice location: United States, 1984

| Physician practice and location | Medicare-allowed amounts | Revenue from Medicare patients | Revenue from all patients | Patients' liabilities per service | Practices for which Medicare-allowed amounts would— | | |
					Increase by 10 percent or more	Change by less than 10 percent	Fall by 10 percent or more
Budget neutral nationwide, no cost index	Percent change				Percent		
Total	0.0	0.5	0.2	1.3	38.1	31.6	30.3
Nonmetropolitan	22.7	11.7	4.1	−2.9	61.1	28.6	10.2
Metropolitan	−3.3	−1.2	−0.4	1.9	34.2	32.1	33.7
Budget neutral by State, no cost index							
Total	0.0	0.0	0.0	−0.1	33.7	41.6	24.7
Nonmetropolitan	9.2	5.1	1.8	0.4	46.6	36.0	17.3
Metropolitan	−1.3	−0.8	−0.3	−0.2	31.5	42.6	25.9
Budget neutral by State and urban-rural, no cost index							
Total	0.0	0.1	0.0	0.1	32.2	43.3	24.5
Nonmetropolitan	0.0	1.1	0.4	1.5	40.6	43.1	16.3
Metropolitan	0.0	−0.1	0.0	−0.1	30.7	43.4	25.9
Budget neutral by carriers' current pay localities, no cost index							
Total	0.0	0.4	0.1	1.2	29.4	46.9	23.8
Nonmetropolitan	0.0	1.0	0.3	2.2	39.9	41.7	18.4
Metropolitan	0.0	0.3	0.1	1.0	27.6	47.8	24.7
Budget neutral nationwide, cost index by State[1]							
Total	0.0	0.2	0.1	0.7	35.1	36.4	28.5
Nonmetropolitan	15.4	7.9	2.8	−1.6	47.3	34.6	18.0
Metropolitan	−2.2	−0.9	−0.3	1.0	33.0	36.7	30.3
Budget neutral nationwide, cost index by State and urban-rural[1]							
Total	0.0	0.3	0.1	0.9	35.4	38.9	25.7
Nonmetropolitan	2.8	2.8	1.0	2.2	46.6	36.0	17.3
Metropolitan	−0.4	−0.1	0.0	0.7	33.5	39.4	27.1
Budget neutral nationwide, cost index by carriers' current pay localities[1]							
Total	0.0	0.3	0.1	0.9	35.5	38.0	26.5
Nonmetropolitan	4.0	3.2	1.1	2.6	45.9	37.1	17.0
Metropolitan	−0.6	−0.1	0.0	0.7	33.7	38.2	28.2

[1] Using the prospective payment system hospital wage index.

NOTE: Definitions of terms used in this table are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data provider file.

- Vary by each of the pay localities currently recognized by Medicare carriers—either to be budget neutral for each locality or to be based on costs.

For the variants that are budget neutral by location, multipliers were set so that Medicare's aggregate payments by location would be no different under the fee schedule than under the current system. Cost-based multipliers were designed to reflect cost differences by location, so Medicare's aggregate payments by location might change (although aggregate payments nationwide would not). A physician-weighted average of the PPS wage index for each county was calculated statewide, separately for urban and nonurban counties in each State, and separately for each pay locality. The PPS wage index may adequately account for differences in physicians' costs by location for the nearly 80 percent of costs that reflect earnings, but it probably does not account well for differences in the other 20 percent of costs

(for office space, supplies, and malpractice insurance). Suitable location-specific indexes for physicians' nonwage costs do not currently exist, though (Congressional Budget Office, U.S. Congress, 1986).

Summary results are presented for all physician specialty groups combined, both nationwide and separately for urban and nonurban areas (Table 8). By design, the average effect nationwide on allowed amounts would be zero for every alternative (budget neutrality). The effects on revenues from Medicare patients and from all patients would not necessarily be zero, but they would be very small for all alternatives, on average, nationwide. In no instance would average receipts nationwide change by as much as 1 percent.

The effects on practices by urban or nonurban location are not zero, though. In general, revenues for practices in nonurban areas would increase, and revenues for practices in urban areas would decrease. The average gains for nonurban practices would generally be substantial, but losses for practices in urban areas would be quite small, because there are so many more urban than nonurban practices.

Nonurban gains and urban losses would be bigger when larger geographic areas were incorporated for payment purposes. For example, allowed amounts for nonurban practices would increase by 23 percent, on average, under a nationwide fee schedule with no specialty differentials. If fees were set by State instead, allowed amounts for nonurban practices would increase by 9 percent to 15 percent. If fees were set separately for areas within each State, either by urban status or by the pay localities currently defined by carriers, allowed amounts for nonurban practices would increase by only 3 percent or 4 percent.

In general, nonurban areas would fare better under the alternatives that use cost-based multipliers than under those that use location-specific, budget-neutral multipliers. This is because urban-rural differentials in Medicare's current payment rates are typically larger than would be justified on the basis of costs (at least as measured by the PPS wage index).

The proportion of practices for which revenues would change substantially, particularly if the change would be a loss of revenues, is one indicator of how disruptive a fee schedule would be. One striking finding in this section is seen by reading down the last column in Table 8, the percent of practices that would lose 10 percent or more in allowed amounts as a result of the payment change considered. If a nationwide fee schedule with no specialty differentials were implemented, about 30 percent of practices would lose 10 percent or more. If payment rates were adjusted by location, the proportion of practices so affected would fall, but not by much, indicating that variation in fees is nearly as large within as across geographic areas. Even if payment rates varied for every pay locality and were set to be budget neutral for each of them, nearly 24 percent of practices would lose 10 percent or more in allowed amounts.

Conclusion

Under each of the fee schedules examined in this article, practice receipts for generalists (as a group) and for nonsurgical specialists would increase, on average, nationwide, but receipts for surgical specialists would fall (Figure 1). Among generalists, gains would usually be larger for general and family practitioners than for internists. The one exception is a fee schedule with specialty-specific RVS's, under which internists would gain more than general practitioners and family practitioners would lose revenues, for reasons explained earlier.

The general direction of these effects would be desirable if, as is often asserted, surgical services are reimbursed too generously relative to primary care. Some of the fee schedules examined here, however, could result in payment rates per unit of time for general and family practitioners that were higher than rates paid to internists, if differences among specialty groups in the average length of visits of a given type that were observed in the mid-1970's still exist. If visit codes were redefined to reflect time, receipts for general and family practitioners would probably increase far less under these options, and receipts for internists would increase more.

Except for the alternatives that would establish budget-neutral payment rates for areas within each State, the fee schedules examined here would increase practice receipts in nonurban areas appreciably, the increase being offset by small reductions in practice receipts in urban areas. These results also would be desirable if, as is widely believed, current payment rates do not adequately account for the costs of rural practice and the relative undersupply of physicians in rural areas. The results by location indicate that there would be little reason to vary payment rates for all of the pay localities currently recognized by carriers. Payments would be substantially the same if there were only two types of localities in each State, urban and nonurban.

About one in four practices nationwide would face a drop of 10 percent or more in allowed amounts if any of the fee schedules examined here were implemented, so the potential for disruption could be significant. The impact on practice revenues from Medicare patients would be substantially smaller, though, because practice revenues would not change at all for unassigned claims. Further, the impact on practice revenues from all patients would be very small, on average, because non-Medicare patients account for 80 percent of practice revenues overall. According to tabulations from HCFA's latest survey of physicians' practice costs and income, for income year 1983 (National Opinion Research Center, 1983-85), however, Medicare patients account for 50 percent or more of the patient load in about 20 percent of practices. Implementation of a Medicare fee schedule could be quite disruptive for these practices. Hence, if a fee schedule were implemented, it would be desirable to phase it in, either by gradually moving more services from the CPR system to a fee schedule or by blending CPR and fee schedule rates for all services for a period of time.

Figure 1

Percent change in physician practice receipts after implementing statewide budget-neutral fee schedules, by physician specialty: United States, 1984

Physician specialty
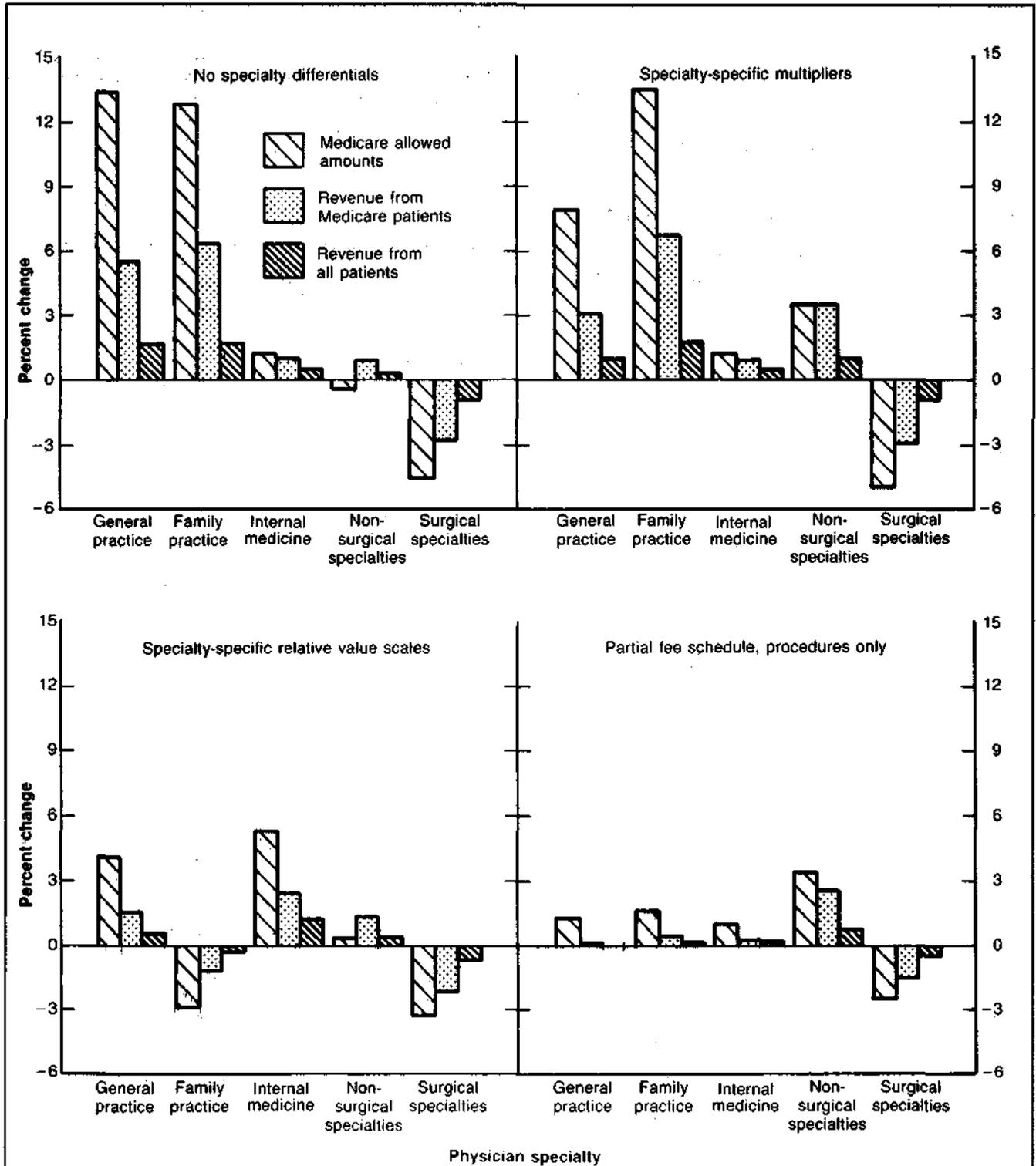
NOTE: Definitions of terms used in this figure are shown in the footnotes to Table 2.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Part B Medicare Annual Data Provider file.

Acknowledgments

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