Trends in physician assignment rates for Medicare services, 1968-85

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This article provides an overview of trends in Medicare assignment rates. It covers changes over time in assignment by demographic characteristics and State and analyzes beneficiary liability. Although assignment rates were rising slowly from 1977 to 1983, beneficiary liability was also rising, primarily because of the rise in physician charges and the reduction on allowed charges. Substantial increases in the assignment rate have coincided with the implementation of provisions in the Deficit Reduction Act of 1984 to encourage assignment, and the assignment rate reached an all time high of 69 percent in 1985.

Introduction

The assignment rate for physicians' services[1] to Medicare beneficiaries continues to be of concern to physicians, Medicare beneficiaries, and the Congress. A large proportion of Medicare beneficiaries are affected financially by unassigned claims. Health care policymakers and researchers, therefore, continue to look for incentives for physicians to accept payment for their services on assignment and for ways to hold down the cost of these services.

Liability from unassigned claims is a significant part of the liability that Medicare enrollees incur for covered services. Under Part A of Medicare, hospital insurance (HI), enrollees are responsible for deductibles and coinsurance for hospital and skilled nursing facility care. Under Part B of Medicare, supplementary medical insurance (SMI), enrollees are responsible for the Part B premium ($15.50 per month in 1985), a yearly deductible ($75), a coinsurance of 20 percent of allowed charges; and, for unassigned claims, the difference between the billed and allowed charge.

Liability for Part B services is considerably more than for Part A. In 1980, 70 percent of liability was for Part B and 30 percent was for Part A (Gornick, Beebe, and Prihoda, 1983). Although Medigap policies[2] generally cover Part B deductibles and coinsurance, they usually do not cover the difference between the billed and allowed charge on unassigned claims for physicians' services. The enrollee must pay the difference out-of-pocket (McCall, Rice, and Hall, 1983). Liability for charges over the allowed amount on unassigned claims is a significant and increasing part of Part B liability. In 1975, liability on unassigned claims for aged enrollees was 14 percent of the total Part B liability (which included the premiums, deductible, and coinsurance). In 1982, liability on unassigned claims had grown to 22 percent of the total Part B liability (Table 1). It is also interesting to note that liability as a percentage of total physician charges decreased from 71 percent in 1975 ($151 of liability out of $214 total charges per enrollee) to 52 percent in 1982 ($344 in liability out of $664 in total charges per enrollee). (Data not shown on table.) This was because the deductible and the Part B premium did not keep pace with inflation in physician charges.

Table 1

Amount and percent of Medicare beneficiary liability for physician services per aged enrollee, by source of liability: United States, 1975 and 1982

Source of liability	Beneficiary liability			
	1975		1982	
	Amount	Percent	Amount	Percent
	Per enrollee			
Total charges	$214	—	$664	—
Total liability	151	100	344	100
Premium	80	53	139	40
Deductible	21	14	37	11
Coinsurance	30	20	91	26
Unassigned claims	21	14	77	22

NOTE: To provide comparable figures for both years, data for California are excluded each year because of errors in California's assignment code in 1975. The data for 1982, which include California are similar to the 1982 data in the table. Total liability includes Part B premium. Totals may not add because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Three goals are related to the assignment option: control of Medicare program expenses, reduction of beneficiary liability, and maintenance of access to services (Rodgers and Musacchio, 1983). To better achieve these goals, several proposals have been made to change the way the assignment option operates. Proposed changes included requiring physicians to periodically choose between accepting assignment for all or for none of their Medicare claims; requiring all physicians to accept assignment for all claims; and reducing the coinsurance rate for claims from physicians who accept assignment, thereby assuring the physicians of receiving a higher percent of their fees from Medicare (Hadley, 1984).

The recent report of the 1982 Advisory Council on Social Security (1983) discussed several policy options on physician assignment. The final recommendation

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[1]Assignment rates discussed in this article are based on services provided by physicians and medical suppliers, including ambulance services, clinical laboratories,and medical supply houses. Most of the charges (about 90 percent) are for services by physicians.
[2]Medigap policies are supplemental health insurance policies designed to supplement Medicare.

by the Council was a statutory revision to the current Medicare assignment system that would require physicians to annually elect whether or not they would accept assignment for all patients.

In 1984, Congress passed the Deficit Reduction Act of 1984 (Public Law 98-369), which made two changes in the way the assignment option operates in Medicare. First, section 2306 of Public Law 98-369 requires that Medicare customary, prevailing, and reasonable (CPR) charges for all physicians' services be frozen for 15 months beginning July 1, 1984, at the levels in effect for the 12-month period ending June 30, 1984. The law establishes the concept of a participating physician as one who voluntarily signs an agreement before October 1 of each year to accept assignment for all services provided to Medicare patients during the following 12-month period. Participating physicians are allowed increases in charges to Medicare patients during the freeze period. These increases do not affect payment during the freeze but will be recognized in future calculations of customary charges of the participating physician when the freeze ends. A nonparticipating physician is allowed to accept assignment on a claim-by-claim basis but cannot increase charges to Medicare patients during the freeze period. (Medicare payments to hospitals and physicians were frozen at the fiscal year 1985 levels through December 14, 1985, under legislation approved by Congress and signed by President Reagan, November 14, 1985, Public Law 99-155.)

Second, section 2303 of Public Law 98-369 modifies the current assignment and billing options for clinical diagnostic laboratory tests provided under Medicare on or after July 1, 1984. Independent and hospital laboratories are required to accept assignment; nonparticipating physicians may continue to accept assignment for laboratory tests on a claim-by-claim basis. All assigned laboratory tests will be paid at 100 percent of the established fee schedule amount (or, if lower, the actual charges). Coinsurance and deductible will not be applied to assigned laboratory charges. Unassigned laboratory bills will be paid at 80 percent of the fee schedule amount, subject to deductible and coinsurance. This article provides baseline data and initial postimplementation data to assess the law's impact on assignment rates.

The purpose of this article is to update, through 1982, some of the earlier data on assignment rates by demographic characteristics of the beneficiary, by geographic region, and by physician specialty. Earlier analyses are extended in two ways:

- Assignment rates are examined separately for Medicare enrollees who are Medicaid eligible (and for whom assignment is mandatory) and for other Medicare enrollees.
- The contribution of a number of factors to the overall increase in beneficiary liability from unassigned claims is also examined.

In addition, this article provides data on nationwide overall assignment rates through 1985.

These data can help in assessing proposals to alter the way Medicare pays physicians. Medicare's current method of paying physicians has been criticized as inflationary, inefficient, and difficult to administer on an equitable basis for both physicians and beneficiaries (Hadley, 1984; Jencks and Dobson, 1985). One proposal for reform of physician payment is the use of a nationally derived fee schedule. A fee schedule, however, does not, per se, address the assignment issue. Advocates of a fee schedule also propose changes in the way assignment operates. A second proposal is a prospective payment system for physicians, (PPSP's) based on diagnosis-related groups (DRG's) for physician care in hospitals (Hadley, 1984; Jencks and Dobson, 1985). Assignment also remains a major issue in PPSP's. In fact, its importance increases because, for reasons detailed by Jencks and Dobson (1985), PPSP's would be easier to design if all claims were assigned. For instance, the incentives for physicians to control costs would be greater if physicians were not allowed to bill patients for amounts over what Medicare would allow under PPSP's.

Under some types of capitation, such as health maintenance organizations (HMO's) or comprehensive medical plans (CMP's) participating in Medicare under the provisions of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), assignment is not an issue. These organizations agree to provide Medicare benefits for a set premium; patients are not billed fee-for-service. Assignment remains an issue, however, under proposals for geographic capitation in which an organization would underwrite Medicare benefits in a defined area in return for a capitation payment (Fox, 1984; Burney et al., 1984). The underwriting organization might also offer beneficiaries alternatives to regular Medicare such as HMO's or preferred provider organizations (PPO's). Physicians could continue their fee-for-service practices and, unless the rules were changed, physicians would have the same assignment options they now have. But there is concern they could extra-bill patients in response to financial pressures they might experience under geographic capitation (Fox, 1984). Thus, for many proposals that restructure the way Medicare pays physicians, assignment is likely to be a major issue.

What is assignment?

Part B of Medicare, the SMI program, provides insurance coverage for expenses incurred for physicians' and other related medical services to Medicare enrollees. The physicians decide how they want to be paid for the services provided. If a physician elects to be paid directly by the carrier (the fiscal agent authorized by Medicare to determine amounts of payments due and to make such payments for covered services provided to SMI enrollees), the payments are "assigned" and the physician agrees to accept, as full payment, the amount that the carrier determines as reasonable. The "reasonable" or

"allowed" charge is the lowest of (1) the actual charge made by the physician for that service, (2) the physician's customary charge (the physician's 50th percentile for that service) or (3) the prevailing charge (set at the 75th percentile of the weighted customary charges) in that locality for that service. The carrier makes payments for 80 percent of the reasonable charge (provided the deductible has been met), and the beneficiary is responsible for the 20-percent coinsurance required by law. If the physician does not accept assignment, the patient is responsible for the entire charge and must submit the bill to the carrier for reimbursement. In such cases, beneficiary liability can be considerably greater because reimbursements are based on 80 percent of the "allowed" or reasonable charge, not the total charge. Under Medicare's CPR charge mechanisms, physicians' charges are passed through screens to determine the "reasonable" or "allowed" charge for each service.

In general, the physician's submitted charge is higher than the allowed charge. In 1982, the submitted charge was 24 percent higher on the average than the allowed charge. Because Medicare pays for physicians' services on the basis of CPR charges, physicians have considerable control over establishing the desired CPR charge level. An increase in physicians' fees in one year raises the level of the CPR screens the next year, subject to a cap from the Medicare Economic Index (MEI), as discussed later. Thus, there is no incentive under the present reimbursement method for physicians not to raise their fees. In fiscal year 1976, the MEI, which limits the rate of increase in physicians' fees, was first applied to prevailing fees for physicians' services. The Medicare Economic Index consists of two components: one measures increases in general earnings levels (attributable to factors other than increases in productivity), and the other measures increases in expenses of the kind incurred by physicians. The Index is calculated as the weighted average of the increases, during a specified period, in several indexes published by the Bureau of Labor Statistics. From 1975 to 1983, the average annual rate of increase in the MEI was 7.2 percent, and thus Medicare physician prevailing charges were limited to an average annual growth of 7.2 percent during that period. To the extent that physicians' customary charges increased at a greater rate than prevailing charges under the MEI, prevailing charge screens have acted as a kind of de facto fee schedule.

Another measure to control physicians' fees was implemented earlier in the 1970's as part of the economic stabilization program (ESP). Phase I of the ESP froze all prices in 1970. Beginning with Phase II and continuing through Phase IV of the ESP (1971-73), the increase in physicians' fees was limited to 2.5 percent annually.

Previous research

Previous research on assignment rates, using Medicare data for 1975, showed considerable variation in assignment rates by age, race, geographic area, and physician specialty (Ferry et al., 1980). Assignment rates were higher for enrollees who were older, of minority races, or lived in the Northeast. Rates were higher for the specialties of pathology and podiatry. Assignment rates were higher for disabled beneficiaries than for aged beneficiaries. As the total annual charges for beneficiaries rose, the percentage of charges assigned also rose. Much of this information has been updated through 1978 (McMillan, Pine, and Newton, 1983).

In recent years, HCFA has sponsored several studies to gain knowledge about factors that influence physicians' decisions on whether or not to accept assignment. A study by Rice and McCall (1982) used Colorado data to examine the relationship between changes in Medicare reimbursement to physicians and changes in the assignment rate. The authors found that increases in physician reimbursement were positively associated with increases in the assignment rate. The study also indicated that increases in the supply of physicians were associated with increases in the assignment rates among general practitioners and internists. Another study by Rice and McCall (1983) looked at all Medicare claims in Colorado in 1979. This study showed higher assignment rates were associated with beneficiaries being in the last year of life or beneficiaries being in poor health. The study found that assignment rates fell as the ratio of submitted charges to Medicare payments rose.

Another HCFA-sponsored study was concerned with estimating the effect of an option requiring physicians to accept all or none of their patients on assignment (Mitchell and Cromwell, 1982). More than two-thirds of physicians (general practitioners, internists, and surgeons) in a 1976 national physician survey from the National Opinion Research Center (1976) stated that the physicians would take none of their patients on assignment if forced to choose. Simulation analysis showed that assignment rates nationwide would fall about 10 percent if physicians were faced with an all-or-nothing assignment decision. Other analyses concluded that increases in Medicare reasonable charges would probably increase assignment rates (Burney et al., 1979; Paringer, 1980; Mitchell and Cromwell, 1982).

Sources and limitations of data

Medicare carriers (Part B fiscal agents) are required to prepare a payment record for all bills reimbursed under Part B of Medicare. The payment records are used administratively to allow HCFA to compare the amount of reimbursement for bills with the amount the carriers disburse each month; to validate entitlement to benefits; and to monitor the computation of the reimbursable amount.

To obtain more detailed information than that available from the payment records, HCFA designed the bill summary record system (referred to as the "bill summary") based on a 5-percent probability sample of Medicare beneficiaries. The bill summary is the main data source for this article. Carriers are instructed to prepare a bill summary record of all claims for each beneficiary in the sample. The bill summary began in 1975. It provides data on type of service (for example, medical care, surgery, or laboratory) and site of service (for example, office or hospital). The bill summary also contains the Medicare beneficiary's identification number, the physician's submitted charges and Medicare's allowed charges, and an indicator of whether or not the claim was assigned.

Demographic data from the master health insurance enrollment file, such as the beneficiary's age, sex, race, and residence, are incorporated into the bill summary. The data base is refined at the end of each year to include only beneficiaries who exceeded the deductible and received Medicare reimbursable benefits. Data are eliminated for those persons not exceeding the deductible because their records may be incomplete (some people submit claims only if they know they have met the deductible).

The data for the aged are derived from a 1-percent sample of aged Medicare beneficiaries. The 1975 data for the disabled are also from a 1-percent sample of disabled persons, but for later years a 5-percent sample of disabled persons was used because of the relatively small size of the disabled population.

The bill summary system did not include claims for services submitted on the HCFA form 1554 (for hospital-based physicians) because reimbursement mechanisms for these services differ from the system used for other services. Reimbursements for claims submitted on the HCFA form 1554 were about 3 percent of total reimbursement. However, form 1554 was discontinued in October 1983, and now data on hospital-based physicians are included in the bill summary system.

An important limitation of some of the data presented in this article concerns collecting the full 5-percent sample of claims from the carriers. Not all carriers submit a complete 5-percent sample of claims in the required time each year, thus, files may be closed with some States having large shortages in counts of physicians' services and charges. These problems vary from year to year with some carriers providing the required sample in one year and not in another. Annual total charges are underestimated by about 3 to 5 percent because of incomplete reporting.

To provide data for years prior to the inception of the bill summary system and to provide the most current data, statistics were obtained from reports that Medicare carriers submitted to HCFA.

Findings

Trends in assignment rates

Assignment rates based on both claims and charges can be seen in Table 2. The assignment rate based on claims is defined as the number of assigned claims expressed as a percent of claims received, excluding claims from hospital-based physicians (until 1983) and group practice prepayment plans, which are assigned by definition. Assignment rates, based on claims, are not exact measures of the financial effect of assignment on beneficiaries. This is so because the rate based on claims could shift if the relation of the average charge on unassigned claims to that on assigned claims changed, even though the rate based on charges remained unchanged. Assignment rates based on claims however, are the only available measures of the assignment rate from 1968 to 1971. The assignment rate based on charges is defined as the total charges on assigned claims expressed as a percent of total submitted charges.

Table 2

Medicare assignment rates based on claims and total charges for physician and related services and percent reduction on charges for aged and disabled enrollees: United States, 1968-85

Year	Assignment rates		Percent reduction on charges
	Claims	Charges	
	Percent		
1968	59.0	—	—
1969	61.5	—	—
1970	60.8	—	—
1971	58.5	53.8	11.4
1972	54.9	50.3	11.2
1973	52.7	48.1	12.2
1974	51.9	47.8	14.4
1975	51.8	47.7	17.4
1976	50.5	47.6	19.5
1977	50.5	48.2	19.0
1978	50.6	49.6	19.3
1979	51.3	50.7	20.8
1980	51.5	51.7	22.4
1981	52.3	53.0	23.5
1982	53.0	54.2	23.7
1983	53.9	55.6	23.2
1984	59.0	59.6	24.9
1985	68.5	68.6	26.9

SOURCE: Health Care Financing Administration, Bureau of Quality Control: Data from the Medicare Contractor Workload System.

The assignment rate based on claims rose from 59.0 percent in 1968 to 61.5 percent in 1969. The rate began to decline in 1970 and continued to drop to a low of 50.5 percent in 1976 and 1977. The beginning of the decline coincided with the implementation of the economic stabilization program, which froze all prices in 1970, and limited physician fees to a 2.5 percent annual increase from 1971 to 1973. In 1976, the MEI was instituted (as mentioned earlier). It limited the rate of increase in physician fees, but much less stringently than the ESP. The average annual increase in the MEI of 7.2 percent from 1975 to 1983 was only slightly lower than that of the Consumer Price Index (CPI), 8.0 percent. The assignment rate based on claims showed a gradual rise from 50.5 percent in 1977 to 53.9 percent in 1983. In 1984, however, the assignment rate based on claims rose to 59.0 percent (an increase of 5.1 percent), and the rate based on charges reached 59.6 percent. The assignment rate has continued to rise, reaching 68.6 percent based on charges in 1985. The rapid increase in assignment rates coincides with the 1984 implementation of the two provisions (participating physicians and changes in payment for clinical diagnostic laboratory tests) of the Deficit Reduction Act of 1984.

In addition, two changes in billing procedures, implemented in October 1983, may have artificially produced an increase in the assignment rate, which did not necessarily reflect a change in physician behavior. These changes were made in response to section 108 of the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). It required that regulations be issued to ensure that the proper distinction be made between professional medical services—personally rendered to individual patients—which are reimbursable under Part B on a charge basis, and professional medical services of general benefit to all patients, which can be reimbursed only on a reasonable cost basis. One purpose of this section was to bring those services of hospital-based physicians (e.g., radiologists and pathologists) that were personally rendered to individual patients under the reasonable charge limits applied to other physicians.

To implement section 108, regulations eliminated combined billing in which the hospital bill included services of radiologists and pathologists furnished under assignment to hospital inpatients and services of physicians furnished under assignment to hospital outpatients. Data from combined billings were formerly excluded from assignment rate calculations. However, the assignment rate could have been raised if physicians whose services were formerly included in combined billing and are now included in assignment rate calculations continued to accept assignment.

Regulations also eliminated form 1554, in which hospitals billed Medicare for services to hospital patients rendered by physicians who were paid by the hospital. These physicians, in effect, had "taken assignment" because they did not bill patients for their services. If these physicians, whose services did not formerly appear in the assignment statistics, now generally accept assignment, then moving their services into the statistics on assignment could also have raised the assignment rate without any change in physician behavior.

An examination of the month-by-month assignment rates based on the number of claims in 1983, 1984, and 1985, suggests that the participating physician and assignment for laboratory service provisions of the Deficit Reduction Act had more effect on the assignment rate than the two billing changes concerning hospital-based physicians. The assignment rate increased 5.4 percentage points from 54.3 percent in September 1983, the month before the billing changes were implemented, to 59.7 percent in September 1984, the month before the participating physician provision took effect. The assignment rate showed a larger increase after the participating physician provision took effect. It increased 8.5 percentage points from 59.7 percent, in September 1984 to 68.2 percent, in December 1985. Data on covered charges from October 1984 through September 1985 indicate that the Deficit Reduction Act provisions had an impact on both the assignment rate for physician services and for nonphysician services, which include laboratory as well as such services as ambulance and durable medical equipment. The assignment rate on charges for physician services rose from 63.6 percent in the period October-December 1984 to 66.4 percent in the period July-September 1985 or 2.8 percentage points. At the same time, the assignment rate for nonphysician services rose from 81.7 to 89.1 percent or 7.4 percentage points. During this period, the total assignment rate (combined physician and nonphysician charges) rose from 66.1 percent to 69.7 percent or 3.6 percentage points.

Trends in percent reduction

Increases in prevailing charges are limited by the MEI. As a result, physician charges are almost always reduced. When charges are reduced on assigned claims, Medicare pays 80 percent of the allowed charge, and the beneficiary pays the remaining 20 percent. In the case of unassigned claims, the beneficiary is also responsible for the difference between the actual and allowed charge.

The percent reduction on charges increased most years (Table 2). In 1971, total submitted charges were reduced 11.4 percent, on the average; by 1985, charges were reduced 26.9 percent. It is interesting to note that during this period (1971 through 1985) of nearly consistent rise in reduction rates, assignment rates declined for a considerable period (5-6 years)

Table 3

Medicare assignment rates for total charges for physician and related services to aged and disabled enrollees, by age, sex, and race: United States, 1975, 1976, and 1982

Age, sex, and race	Aged: Total charges in millions 1982	Aged: Percent of charges assigned 1975[1]	Aged: Percent of charges assigned 1982	Aged: Percent change 1975-82
U.S. total	$17,607	47.2	51.8	9.8
Age				
65-69 years	4,322	44.1	47.3	7.3
70-74 years	4,612	45.0	50.5	12.2
75-79 years	3,884	47.5	51.6	8.6
80-84 years	2,598	49.4	53.8	8.9
85 years or over	2,190	57.7	61.1	5.9
Sex				
Male	7,567	47.0	50.6	7.7
Female	10,040	47.3	52.6	11.2
Race				
White	15,754	45.0	49.3	9.6
All other	1,390	79.3	79.9	0.8
	Disabled			
	Total charges in millions 1982	Percent of charges assigned 1976[2]	Percent of charges assigned 1982	Percent change 1976-82
U.S. total	$2,245	63.6	69.9	9.9
Age				
Under 25 years	58	84.3	88.7	5.2
25-44 years	455	75.5	80.0	6.0
45-64 years	1,733	60.2	66.6	10.6
Sex				
Male	1,270	64.6	69.7	7.9
Female	975	62.2	70.2	12.9
Race				
White	1,801	59.4	66.3	11.6
All other	397	87.7	86.8	-1.0

[1]Data for California were incorrectly coded and have been omitted from U.S. total.
[2]Similar data for 1975 unavailable by age, sex, and race.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

and then began to rise. This observation seems to suggest that even during periods when attempts to control physicians' fees were in effect, physicians continued to submit higher charges irrespective of their assignment decisions.

Assignment by beneficiary characteristics

Data on assignment rates based on charges for aged enrollees in 1975 and 1982 and disabled enrollees in 1976 and 1982 by age, sex, and race are shown in Table 3. These data, as well as the data shown in Table 2, include bills for Medicare beneficiaries who are also enrolled in Medicaid. For services to Medicaid enrollees, assignment is mandatory (discussed later); thus, when claims for dually entitled people (generally referred to as "crossovers") are excluded, the assignment rate is lower. Total charges for physicians' services to aged[3] enrollees were $17.6 billion in 1982. Of that amount, 51.8 percent were assigned charges, up from 47.2 percent in 1975, a 9.8 percent increase.

Ferry et al., (1980) discussed the relationship of assignment rates to age. Using data for 1975, they found that assignment rates were higher for succeedingly older age groups. For example, the assignment rate that year was 44.1 percent for enrollees 65-69 years of age compared with 57.7 percent for enrollees 85 years of age or over. That pattern continued through 1982 when the assignment rate was 47.3 percent for enrollees 65-69 years of age and 61.1 percent for enrollees 85 years of age or over. It should be noted that as age increases, the proportion of people with coverage under Medicaid, for which there is mandatory assignment, also increases.

During the period 1975-82, assignment rates for aged females increased from 47.3 percent of charges to 52.6 percent. Assignment rates for charges to aged males increased from 47.0 percent in 1975 to 50.6 percent in 1982.

[3]Aged refers to Medicare enrollees 65 years of age or over.

Assignment rates for charges to aged enrollees of races other than white were considerably higher, about 30-34 percentage points, than for aged white enrollees in both 1975 and 1982. During the period 1975-82, the assignment rate for charges to white enrollees rose from 45.0 percent to 49.3 percent. There was little change in the rate for enrollees of races other than white, rising from 79.3 percent in 1975 to 79.9 percent in 1982. The effect of mandatory assignment for services provided to crossovers is also reflected in the higher rates shown for enrollees of races other than white because a much larger proportion of enrollees of other races are crossovers.[4]

Assignment rates for charges to disabled enrollees under 65 years of age have historically been about 10-15 percentage points higher than those for aged persons. In 1982 total charges to disabled enrollees were $2.2 billion. Of that amount, 69.9 percent were assigned, a 6.3 percentage point increase over the 1976 rate of 63.6 percent. Between 1975 and 1982, assignment rates for the disabled increased in each age and sex group. The pattern among the disabled by age, however, was opposite to that observed among the aged—the assignment rate was higher for younger age groups. This is most likely because a substantial number of the younger disabled are institutionalized mentally retarded people from whom it would be impractical to collect the liability on unassigned claims (Lubitz and Pine, 1986).

Assignment by region

Among the regions, assignment rates on charges to aged enrollees in 1982 ranged from 66.4 percent in the Northeast to 45.2 percent in the North Central (Table 4). Although not shown, the assignment rates for the disabled were highest in the Northeast, 79.1 percent, and lowest in the South, 66.0 percent.

There was wide variation in assignment rates among the States, with figures for the aged ranging from 17.0 percent in South Dakota to 87.0 percent in Rhode Island. There was no apparent geographic pattern in assignment rates, which were often quite different for neighboring States. For example, in 1982, the assignment rate for aged persons in Rhode Island was 87.0 percent and in Connecticut only 44.8 percent; in Michigan, 81.4 percent, and in Wisconsin only 32.8 percent. The same wide variation in assignment rates for these States was noted also in 1975. Data for the disabled show that there were similar variations in assignment rates in these States also.

Assignment by buy-in status

To examine the effect of mandatory assignment for persons also covered under Medicaid, charges for crossovers identified as covered under a State buy-in agreement were separated from all other charges. This separation produced a voluntary assignment rate in 1982 of 45.6 percent for the aged without Medicaid coverage, down nearly 6 percentage points from the 51.8 percent rate for all aged enrollees (Table 5). Similar differences were also found for the disabled population. Separating the crossovers from all other disabled enrollees resulted in a voluntary assignment rate of 63.1 percent, down about 7 percentage points from the 69.9 percent for all disabled enrollees (data not shown in table.) Separate data on assignment rates for buy-ins and nonbuy-ins are not available for 1975. The overall rise shown in assignment rates between 1975 and 1982 could have been the result of an increase in the percent of the Medicare population who were buy-ins. But the percent of buy-ins actually decreased during that period; therefore, there was a real increase in voluntary assignment rates between 1975 and 1982.

The separation of buy-ins from other enrollees had its greatest effect on the assignment rates for those groups with the highest proportions of buy-ins. Thus, the difference between assignment rates for all Medicare enrollees and those without buy-in status was greatest for older enrollees, for females, and for enrollees of races other than white.

The data in Table 5 do not reflect the full effect of mandatory assignment because the Medicare files identify only those crossovers covered under a State buy-in agreement. States decide for whom to buy-in. In 1982, only one-half of the States and the District of Columbia had buy-in agreements that covered all their Medicaid eligibles; 21 States did not have buy-in agreements for their medically needy population, although some of these enrollees had Part B coverage through premiums paid by themselves or on their behalf. Thus, the data presented in Table 5 underestimate, to some extent, the influence of mandatory assignment on the assignment rate. We estimate that the buy-in indicator identifies about 84 percent of the Medicaid population.

Assignment rates by buy-in status and geographic area are shown in Table 6. After the charges with mandatory assignment were removed, the West showed the greatest change in the assignment rates for both aged and disabled enrollees. Separating the charges with mandatory assignment (i.e., charges for those covered under a buy-in agreement) from all other charges resulted in a drop from 45.5 percent to 31.3 percent (down 14.2 percentage points) for all aged nonbuy-in enrollees in the West and a drop from 69.4 percent to 50.0 percent (down 19.4 percentage points) for all disabled nonbuy-in enrollees. One reason for the difference in these rates in the West is that aged and disabled buy-in enrollees represented substantially higher than average proportions of the total SMI enrollment, 13.1 percent of aged enrollees and 32.7 percent of the disabled compared with 9.0 and 18.9 percent nationally. When the effect of mandatory assignment was eliminated, the West had the lowest assignment rate instead of the North Central region.

[4]A fuller discussion of the crossover population can be found in McMillan, Pine, and Newton (1983).

Table 4

Medicare total charges for physician and related services and percent assigned for aged enrollees, by State: United States, 1975 and 1982

Area of residence	Total charges in millions 1982	Percent of charges assigned		Percent change 1975-82
		1975	1982	
U.S. total	$17,607	[1]47.2	51.8	9.8
Northeast	4,557	59.9	66.4	10.9
New England	974	64.6	71.3	10.4
Maine	64	72.5	72.8	.4
New Hampshire	51	52.3	53.3	1.9
Vermont	36	70.6	54.3	-23.1
Massachusetts	483	77.4	84.6	9.3
Rhode Island	96	81.6	87.0	6.6
Connecticut	242	31.2	44.8	43.6
Middle Atlantic	3,583	58.6	65.0	10.9
New York	1,854	57.7	62.5	8.3
New Jersey	678	52.3	56.0	7.1
Pennsylvania	1,051	65.1	75.1	15.4
North Central	3,854	36.7	45.2	23.2
East North Central	2,645	38.6	50.1	29.8
Ohio	404	26.6	35.8	34.6
Indiana	308	25.0	26.6	6.4
Illinois	750	32.2	39.5	22.7
Michigan	847	66.0	81.4	23.3
Wisconsin	335	35.6	32.8	-7.9
West North Central	1,209	32.8	34.5	5.2
Minnesota	243	29.5	27.4	-7.1
Iowa	208	25.8	28.6	10.9
Missouri	373	31.8	40.0	25.8
North Dakota	48	33.2	25.2	-24.1
South Dakota	44	19.8	17.0	-14.1
Nebraska	97	29.6	24.6	-16.9
Kansas	196	52.4	50.0	-4.6
South	5,558	46.1	48.4	5.0
South Atlantic	3,005	-3.8	47.4	8.2
Delaware	46	62.1	67.8	9.2
Maryland	282	57.2	69.8	22.0
District of Columbia	62	68.8	75.5	9.7
Virginia	296	49.4	51.3	3.9
West Virginia	62	47.5	49.5	4.2
North Carolina	304	46.7	48.6	4.1
South Carolina	132	61.1	59.2	-3.1
Georgia	311	53.2	55.2	3.8
Florida	1,510	34.5	37.7	9.3
East South Central	838	50.6	50.3	-.6
Kentucky	164	37.8	35.8	-5.3
Tennessee	277	43.3	46.4	7.2
Alabama	253	60.1	60.4	.5
Mississippi	144	62.7	56.5	-9.9
West South Central	1,715	48.0	49.1	2.3
Arkansas	197	52.2	57.0	9.2
Louisiana	217	33.1	36.4	10.0
Oklahoma	205	31.2	32.0	2.6
Texas	1,096	54.2	53.4	-1.5

See footnotes at end of table.

Table 4—Continued

Medicare total charges for physician and related services and percent assigned for aged enrollees, by State: United States, 1975 and 1982

Area of residence	Total charges in millions 1982	Percent of charges assigned		Percent change 1975-82
		1975	1982	
West	3,629	(1)	45.5	—
Mountain	738	37.4	38.6	3.2
Montana	51	22.6	24.0	6.2
Idaho	49	26.3	21.2	-19.4
Wyoming	18	30.8	25.6	-16.9
Colorado	166	48.8	43.5	-10.9
New Mexico	81	47.7	47.2	-1.1
Arizona	240	27.8	33.2	19.4
Utah	62	41.0	43.9	7.1
Nevada	71	47.5	56.9	19.8
Pacific	2,891	(1)	47.3	—
Washington	292	34.2	28.0	-18.1
Oregon	184	19.9	22.1	11.1
California	2,351	(1)	51.7	—
Alaska	6	38.2	37.9	-.8
Hawaii	57	38.5	40.9	6.2
Residence unknown	10	—	—	—

[1] Data from California were incorrectly coded and have been omitted.
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Table 5

Medicare assignment rates for total charges for physician and related services to aged enrollees, by buy-in status, age, sex, and race: United States, 1982

Age, sex, and race	Assignment rates			Buy-ins as a percent of total SMI[2] enrollment
	All enrollees	Without buy-in	With buy-in[1]	
U.S. total	51.8	45.6	91.4	9.0
Age				
65-69 years	47.3	43.1	91.4	5.6
70-74 years	50.5	44.7	92.4	8.0
75-79 years	51.6	45.4	91.0	10.0
80-84 years	53.8	46.7	90.5	12.2
85 years or over	61.1	52.6	91.3	17.0
Sex				
Male	50.6	46.3	92.8	6.0
65-69 years	46.8	44.1	91.4	—
70-74 years	50.2	46.0	93.4	—
75-79 years	51.2	46.2	93.8	—
80-84 years	53.1	47.3	91.8	—
85 years or over	58.6	53.4	92.7	—
Female	52.6	45.0	90.7	11.0
65-69 years	47.8	42.0	91.3	—
70-74 years	50.7	43.5	91.9	—
75-79 years	51.9	44.8	89.5	—
80-84 years	54.2	46.3	89.9	—
85 years or over	62.2	52.2	91.0	—
Race				
White	49.3	43.9	90.5	—
All other	79.9	71.7	94.6	—

[1] Although charges to Medicaid enrollees are automatically assigned, some enrollees may have incurred expenses before becoming entitled to Medicaid. Thus, assignment rates are less than 100 percent.
[2] Supplementary medical insurance.
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Table 6

Medicare assignment rates for total charges for physician and related services to aged and disabled enrollees, by buy-in status and geographic area: United States, 1982

Enrollee group and geographic area	All enrollees	Without buy-in	With buy-in	Buy-in as a percent of total SMI enrollment
		Percent		
Aged				
U.S. total	51.7	45.6	91.4	9.0
Northeast	66.4	63.6	94.1	6.0
New England	71.3	68.9	97.2	6.7
Middle Atlantic	65.0	62.1	93.3	6.0
North Central	45.2	41.8	90.8	4.9
East North Central	50.1	46.9	92.0	4.7
West North Central	34.5	30.7	88.0	5.2
South	48.3	41.2	88.0	12.2
South Atlantic	47.4	41.7	84.5	10.0
East South Central	50.3	40.8	88.6	17.7
West South Central	49.1	40.5	92.6	12.4
West	45.5	31.3	93.6	13.1
Mountain	38.6	33.3	87.5	7.1
Pacific	47.3	30.7	94.1	15.2
Disabled				
U.S. total	69.9	63.1	92.8	18.9
Northeast	79.1	75.8	94.8	16.7
New England	83.9	80.4	98.2	20.0
Middle Atlantic	78.0	74.8	93.9	15.8
North Central	67.1	62.6	92.7	13.4
East North Central	69.3	65.1	93.4	12.9
West North Central	60.6	55.2	90.5	14.9
South	66.0	60.7	89.3	17.6
South Atlantic	65.1	60.8	85.2	16.5
East South Central	66.5	59.3	93.3	21.5
West South Central	67.3	61.5	93.8	16.2
West	69.4	50.0	94.6	32.7
Mountain	55.0	49.0	90.6	14.5
Pacific	72.5	50.3	94.8	38.3

[1] Although charges to Medicaid enrollees are automatically assigned, some enrollees may have incurred expenses before becoming entitled to Medicaid; thus, assignment rates are less than 100 percent.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Assignment by physician specialty

Overall assignment rates and average percent reduction for assigned and unassigned charges by physician specialty for aged enrollees are shown in Table 7. For 11 of the 15 specialties examined, assignment rates for the aged increased or remained about the same, with dermatology showing the greatest increase, rising from 40.2 percent in 1975 to 47.7 percent in 1982. The highest assignment rates in 1975 and 1982 were for podiatry, pathology, and radiology; the lowest rates were for chiropractic, otology/laryngology/rhinology, and ophthalmology. The specialties accounting for the largest amount of Medicare charges were internal medicine (17 percent of charges) and general surgery (9 percent). The assignment rate for internal medicine increased from 43.4 percent to 47.5 percent between 1975 and 1982; the rate for general surgery was the same for 1975 and 1982, 51 percent.

The average percent reduction on physicians' charges for aged and disabled enrollees combined increased from 11.4 percent in 1971 to 24.9 percent in 1984 (Table 2). The rise in the reduction rates may be, in part, because of the effect of the MEI, as mentioned earlier, which limits the rate of increase in prevailing charges for physicians' services. Data in Table 7, for aged enrollees only, show that the percent reduction in both 1975 and 1982 was about the same for assigned and unassigned charges. Percent reduction on assigned and unassigned charges by geographic area (not shown) varied only slightly. Age, sex, and race variables had little or no relation to the amount of reduction.

Reduction on claims for services to disabled persons were about the same as that for aged enrollees (data not shown in table). In 1976 charges were reduced 20.3 percent on all charges to disabled enrollees with little difference between that for assigned and unassigned charges. By 1982 the reduction on charges to disabled enrollees was 25.0 percent overall, 24.5 for assigned charges and 26.0 for unassigned charges.

The percent reduction varied by physician specialty and was considerably greater for each specialty in 1982 than in 1975 (Table 7). In 1975, reduction on charges to the aged ranged from 13.3 percent for the chiropractic speciality to 23.6 percent for anesthesiology; in 1982 the range was from 20.5 percent for dermatology to 36.6 percent for anesthesiology.

The reduction on charges, assigned and unassigned, to disabled enrollees was also greatest for anesthesiology (data not shown in table). In 1976, the reduction in charges for that specialty was 28.5 percent. In 1976, charges from radiology had the least reduction, 15.7 percent. In 1982, the reduction in charges for anesthesiology had risen to 37.8 percent; the specialty with the least reduction was dermatology with 21.2 percent.

Beneficiary liability

A very large proportion of Medicare enrollees are affected by the physician's decision on assignment. In 1975, about 70 percent of aged enrollees who received payments for physicians' services had some liability from unassigned claims; in 1982, nearly 80 percent of enrollees with reimbursement for physicians' services were affected (Table 8).

There was wide variation by State in the percent of users affected by unassigned claims. In 1975, one-third (17) of the States had 80 percent or more of users with liability from unassigned claims, with Oregon having the highest percent, 93.3 percent. Most of the States, with 80 percent or more of users affected by unassigned claims, had a relatively low percent of Medicare enrollees covered by Medicaid. Mississippi had the smallest proportion of enrollees affected by unassigned claims in 1975, 48.5 percent. In that State, buy-ins were a large proportion (30 percent) of the total Part B enrollment. In 1982, more than one-half (29) the States had 80 percent or more of enrollees affected by unassigned claims. The range was from 94.5 percent in Oregon to 51.4 percent in Rhode Island. Rhode Island and the District of Columbia were the only areas that had smaller percentages of users affected by unassigned claims in 1982 than in 1975.

A smaller proportion of disabled than aged users were affected by unassigned claims. In 1976, the range in the percentage affected among the States was from 30.5 percent in Maine to 88.3 percent in Arizona. In 1982, the proportion of disabled enrollees with at least one unassigned claim was 63.5 percent, ranging from 25.0 percent in the District of Columbia to 89.6 percent in Florida. Unlike the proportion for the aged, only three States had 80 percent or more of

Table 7

Medicare assignment rates for total charges for physician and related services and average percent reduction for aged enrollees, by physician specialty: United States, 1975 and 1982

Physician specialty	Total charges in millions 1982	Percent of charges assigned		Average percent reduction					
				All charges		Assigned charges		Unassigned charges	
		1975[1]	1982	1975[1]	1982	1975[1]	1982	1975	1982
General practice	$1,079.6	44.1	44.2	18.4	24.5	18.5	25.4	18.1	23.6
Family practice	718.9	50.3	50.3	18.5	24.9	19.1	26.0	17.7	23.9
Internal medicine	3,050.2	43.4	47.5	18.1	23.3	18.5	24.1	17.7	22.6
Cardiovascular disease	708.5	47.5	54.7	19.3	23.4	19.3	24.0	19.2	22.6
Dermatology	233.6	40.2	47.7	17.4	20.5	18.9	22.3	15.8	18.8
General surgery	1,540.8	51.9	51.1	18.8	26.4	19.5	28.0	17.8	24.6
Oto/Laryn/Rhin[2]	179.2	35.5	40.0	20.0	27.0	20.1	29.9	19.9	25.7
Ophthalmology	1,487.7	38.4	41.0	17.0	20.7	17.0	23.5	16.8	18.8
Orthopedic surgery	931.0	47.1	42.9	19.8	26.9	20.0	27.9	19.5	26.2
Urology	676.0	45.8	43.2	18.4	25.0	19.1	26.9	17.8	23.5
Anesthesiology[3]	875.8	46.5	42.0	23.6	36.6	23.4	36.8	23.7	36.4
Pathology[3]	195.4	60.5	64.8	16.5	23.6	14.9	23.6	19.2	23.6
Radiology[3]	1,093.5	52.8	60.2	15.0	21.4	13.9	21.7	16.2	20.8
Chiropractic	111.4	24.7	27.9	13.3	21.1	12.7	23.6	13.3	20.0
Podiatry	299.9	64.2	65.0	20.5	25.0	22.5	27.3	16.9	21.8

[1]Data for California were incorrectly coded and have been omitted.
[2]Otology/laryngology/rhinology.
[3]Generally hospital-based, thus a substantial proportion of claims for services were not included in the Part B bill summary record.

NOTE: The physician specialty is based on a 2-digit code assigned by the carrier.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Table 8

Percent of Medicare aged and disabled users[1] with unassigned claims, by State: United States, 1975, 1976, and 1982

Area of residence	Percent of users with unassigned claims			
	Aged		Disabled	
	1975	1982	1976[2]	1982
U.S. total	69.7	79.3	59.5	63.5
Northeast	71.8	74.4	56.4	57.1
New England	61.0	66.1	45.3	45.2
Maine	53.8	66.9	30.5	42.6
New Hampshire	69.6	82.2	65.2	66.4
Vermont	57.1	74.1	42.2	47.2
Massachusetts	51.3	57.0	36.6	33.9
Rhode Island	57.2	51.4	41.5	33.8
Connecticut	83.7	84.1	66.7	69.0
Middle Atlantic	75.4	77.2	59.6	60.6
New York	75.4	77.1	58.5	59.7
New Jersey	82.1	84.4	67.4	66.6
Pennsylvania	71.2	72.9	56.3	57.9
North Central	79.8	83.1	64.8	66.2
East North Central	79.8	82.0	63.8	64.7
Ohio	86.7	86.8	72.5	72.1
Indiana	88.3	91.2	77.7	80.1
Illinois	81.5	85.8	62.1	67.4
Michigan	64.2	64.7	52.0	48.1
Wisconsin	80.6	85.8	60.1	62.9
West North Central	79.6	85.4	67.5	70.6
Minnesota	80.1	83.6	66.4	66.8
Iowa	84.5	87.2	68.3	72.4
Missouri	79.7	83.8	68.9	70.4
North Dakota	78.3	87.7	66.1	61.1
South Dakota	87.2	93.0	75.2	79.9
Nebraska	85.4	92.2	67.3	76.2
Kansas	67.6	82.7	62.4	70.4
South	70.7	79.6	62.9	68.1
South Atlantic	75.2	82.2	62.7	70.3
Delaware	70.0	76.0	52.8	57.1
Maryland	66.8	72.8	49.9	54.3
District of Columbia	63.7	59.5	33.3	25.0
Virginia	69.4	79.4	55.7	63.5
West Virginia	67.6	76.4	60.8	65.5
North Carolina	69.6	77.4	61.9	68.4
South Carolina	64.1	72.5	59.4	63.1
Georgia	63.5	70.5	61.8	59.6
Florida	86.5	92.2	74.9	89.6
East South Central	63.1	73.9	61.6	65.3
Kentucky	72.3	78.5	66.6	68.7
Tennessee	72.0	78.0	66.2	69.7
Alabama	56.1	68.7	54.7	58.4
Mississippi	48.5	66.3	58.1	63.9
West South Central	67.8	78.3	64.3	65.8
Arkansas	66.6	73.6	64.5	69.3
Louisiana	68.4	79.1	66.0	67.0
Oklahoma	77.1	83.6	71.6	75.2
Texas	65.6	77.9	61.8	62.1

See footnotes at end of table.

Table 8—Continued

Percent of Medicare aged and disabled users[1] with unassigned claims, by State: United States, 1975, 1976, and 1982

Area of residence	Percent of users with unassigned claims			
	Aged		Disabled	
	1975	1982	1976[2]	1982
West	([4])	80.6	([4])	58.3
Mountain	79.7	86.8	75.5	76.1
Montana	86.8	90.9	78.3	77.7
Idaho	85.1	92.4	75.4	83.3
Wyoming	83.5	89.6	85.5	88.5
Colorado	71.0	83.4	66.9	68.6
New Mexico	75.7	80.8	67.0	67.1
Arizona[3]	87.5	89.0	88.3	85.0
Utah	74.9	86.9	67.7	69.5
Nevada	77.3	83.9	69.2	73.1
Pacific	([4])	78.6	([4])	53.7
Washington	81.6	87.9	66.6	70.5
Oregon	93.3	94.5	82.6	87.3
California	([4])	75.0	([4])	48.4
Alaska	76.2	80.6	71.4	71.8
Hawaii	76.4	82.5	49.7	72.7

[1] Enrollees who exceeded the deductible and received reimbursements under the Medicare supplementary medical insurance program.
[2] Data by State unavailable in 1975.
[3] No Medicaid program; State buys-in for supplemental security insurance recipients.
[4] Data for California incorrectly coded.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

disabled enrollees with unassigned claims in 1976 and only six States had 80 percent or more enrollees with unassigned claims in 1982.

The fundamental importance of the assignment rate is its effect on beneficiary liability for Medicare-covered physician services, although it is unknown just how much of the incurred liability is actually collected. Despite the modest increase in the assignment rate from 1975 to 1982, beneficiary liability from unassigned claims increased, both for aged and disabled enrollees (Table 9). For example, between 1975 and 1982, beneficiary liability (after adjusting for inflation) per aged person with unassigned claims increased 51 percent; liability per aged user of physician services increased 64 percent; and liability per aged enrollee increased 105 percent. In 1982, average beneficiary liability from unassigned claims was $154 per person with unassigned claims, $123 per user of physician services, and $77 per enrollee. These average amounts may not seem excessive; however, the distribution of liability for unassigned claims among users of physician services is very uneven. For example, 4 percent of aged users (three-fourths of a million) had liability from unassigned claims of $300 to $499 and another 6 percent (nearly 1 million) had liability of $500 and over in 1982 (Table 10).

The liability from reduction on unassigned claims is of particular importance for enrollees with large amounts of liability from Part B services. On the average, 36.3 percent of total Part B liability (excluding premium payments) was from the reduction on unassigned claims (Table 11). But 43.2 percent of the liability for enrollees with $750-$1,499 in total Part B liability was from unassigned claims, and for enrollees with $1,500 or more in liability, an average of 53.8 percent was from unassigned claims.

Why did beneficiary liability from unassigned claims (exclusive of deductible and coinsurance) increase, despite the 9.8 percent increase in the assignment rate for the aged from 1975 to 1982? Liability from unassigned claims is the product of three factors—total charges for physician services, the percent of those charges unassigned, and the percent reduction on unassigned claims:

Average liability from unassigned claims per user =
Average charges per user
× percent of charges unassigned
× percent reduction on unassigned charges

The increase in liability from unassigned claims can be allocated to changes in each of its three component factors. The results of this allocation, using the

Table 9

Average amount of Medicare beneficiary liability from unassigned claims for aged and disabled enrollees, by selected measure: United States, 1975 and 1982

Selected measure	Liability from unassigned claims				
	Unadjusted for inflation			Adjusted for inflation[1]	
	1975	1982	Percent increase 1975-82	1982	Percent increase 1975-82
Aged					
Per person with unassigned claims	$57	$154	170	$86	51
Per user	42	123	193	69	64
Per enrollee	21	77	267	43	105
Disabled					
Per person with unassigned claims	66	173	162	97	47
Per user	41	113	176	63	54
Per enrollee	15	65	333	36	140

[1] Figures for 1982 were adjusted for inflation by use of the Consumer Price Index ("all items") for urban consumer.

NOTE: Data for California are excluded in both years because of coding errors in 1975. The 1982 figures with or without California are nearly the same.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Table 10

Distribution of Medicare aged and disabled users of physician and related services, by amount of liability from unassigned claims: United States, 1982

Amount of liability from unassigned claims	Aged		Disabled	
	Number in thousands	Percent	Number in thousands	Percent
Total	16,002	100	1,544	100
$0	3,305	21	565	37
$1-99	8,635	54	650	42
$100-299	2,387	15	189	12
$300-499	724	4	60	4
$500 or more	950	6	81	5

NOTE: Totals may not add because of rounding.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

measure of reimbursement per aged user of Part B services as an example are shown in Table 12. From 1975 to 1982, the large increases in inflation-adjusted average charges per user from $440 to $594 and in the percent reduction on unassigned claims from 18 to 24 percent overwhelmed the effect of the decrease from 53 to 48 percent in unassigned charges. The increases in physician charges per user and in the percent reduction on unassigned charges contributed roughly the same amount to the increase in overall liability.

This analysis shows the great importance of the increase in physician charges and in the percent reduction on unassigned claims on beneficiary liability. The assignment rate would have had to have risen to 71 percent in 1982, instead of the actual rate of 51.8 percent, to counter the effect of increased physician charges and increased reduction in charges on unassigned claims. If the assignment rate had been 71 percent, beneficiary liability per user (inflation adjusted) would have remained unchanged from 1975 to 1982. The recent jump, after 1983, in the assignment rate is expected to have a moderating effect on changes in beneficiary liability. The extent of the effect will be known by examining more detailed data for 1984 and later years.

Discussion

The rise in the national assignment rate from 53.9 percent of claims in 1983 to 59.0 percent in 1984 is quite encouraging. The 5-percentage points increase in a 1-year period is the most dramatic change in assignment rates in the history of the Medicare program. Most of this increase is probably because of recent changes in assignment rules in the Deficit Reduction Act of 1984: the concept of "participating" physicians (about one-third of the physicians treating Medicare patients agreed to participate as of October 1, 1984); required assignment for all laboratory tests performed by independent and hospital laboratories; and 100-percent reimbursement for all assigned laboratory tests performed in other settings. However, another change that contributed to the rise in the assignment rate was the change in billing methods for hospital-based physicians. This contribution to the rise in assignment rate does not reflect a real change in physician behavior but merely a change in the way assignment rates are calculated.

The small rise (less than 4 percent) in assignment rates over the 7-year period from 1976 to 1983 was not enough to cause a major change in beneficiary liability from unassigned claims. Total beneficiary liability from unassigned claims during that period had actually been increasing because of increases in physicians' charges and in the percent reduction on

Table 11

Percent distribution of Medicare users and source of liability from Part B services for aged enrollees, by amount of liability: United States, 1982

Amount of liability[1]	Percent of users	All liability	Source of liability		
			Deductible	Coinsurance	Reduction on unassigned claims
			Percent distribution		
Total	100.0	100.0	16.8	46.9	36.3
$1-299	72.2	100.0	39.3	40.2	20.5
$300-749	17.8	100.0	12.6	54.0	33.4
$750-1,499	7.0	100.0	5.7	51.1	43.2
$1,500 or more	3.1	100.0	2.5	43.7	53.8

[1] Total liability does not include the Part B premium.
SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

Table 12

Liability from unassigned claims for aged Medicare enrollees using Part B services and factors affecting change in liability: United States, 1975 and 1982

Measure	Year		Contribution to increased liability	
	1975	1982	Amount	Percent
Average liability from unassigned claims per user	$42	$69	$27	100
Factors affecting liability:				
Average charges per user	440	594	16	61
Percent of unassigned charges	53	48	−4	−15
Percent reduction on unassigned charges	18	24	15	54

[1] Dollar figures for 1982 were adjusted for inflation by use of the Consumer Price Index ("all items") for urban consumers.

NOTE: Data for California are excluded in both years because of coding errors in 1975. The 1982 figures were nearly the same when California data for 1982 were included. The technique for ascribing the change in the amount of liability to its components is described in Springer, Herlihy, and Beggs (1965).

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System.

unassigned claims. The recent surge in assignment rates, however, is likely to have a substantial effect on reducing beneficiary liability.

The assignment rates for particular groups have been much higher than the overall average. For example, higher assignment rates for minorities, as first reported by Ferry et al., have remained through the years; the higher assignment rates for disabled people and for older enrollees have also persisted. Additionally, assignment rates were found to be higher for enrollees in their last year of life, for enrollees in poor health (Rice and McCall, 1983) and for enrollees with high total annual physician charges (Ferry et al., 1980). This suggests that physicians consider the patients' ability to pay when deciding whether or not to accept assignment. Furthermore, it is possible that physicians also consider their patients' ability to pay when deciding how aggressively to pursue full payment on unassigned bills.

We found considerable geographic variation in the assignment rate. We have no explanation for the extremely wide variation, 17.0 percent in South Dakota to 87.0 percent in Rhode Island. Some likely factors are suggested in a report by the Connecticut Medical Society, which focused on reasons why the assignment rate in their State was so low (45 percent in 1982) compared with the adjacent States of Rhode Island and Massachusetts (87 and 85 percent) (Council of the Connecticut State Medical Society, 1977). Factors identified include time the Medicare carrier takes to pay claims, whether the carrier is also a major "Medigap" insurer, and whether the Medigap policies cover the deductible (Medigap policies generally cover the 20-percent coinsurance). Billing is greatly simplified when the carrier is also the Medigap insurer and when Medigap covers the deductible. A physician accepting assignment need submit only one claim to the carrier and never has to bill the patient even for the deductible. On the other hand, if the carrier is not the medigap insurer, the physician must also bill the patient for the deductible and coinsurance even when he or she accepts assignment. If further study confirms the impression from Connecticut, it may be possible to raise the assignment rates in certain States through regulatory changes; such changes would provide incentives for coordination between the carrier and major medigap insurers on assigned bills. As long as residents of different States incur different liability because of different assignment rates, there will remain an inequity for Medicare beneficiaries.

An important finding of this study concerns the effect of mandatory assigned charges from services to Medicaid eligibles. Assignment rates for aged enrollees without buy-in are considerably lower than the overall average. The assignment rate in 1982 for enrollees without buy-in was 45.6 percent nationally, with a low of 31.3 percent in the West. These rates mean that voluntary physician acceptance of assignment is really lower than the overall assignment rate would indicate. The number of Medicaid-covered aged persons has declined in recent years. If this trend continues, it will

tend to depress the overall assignment rate because the mandatory portion is declining. This also implies that the recent increase in assignment rates is more significant than it first appears.

Another significant finding of this study is the continued rise in the reduction of total submitted charges. On assigned claims, beneficiaries have some protection from the high physician charges; however, the amount of charges resulting from the 23.7 percent reduction on unassigned charges for aged beneficiaries and the 26.0 percent reduction for disabled beneficiaries in 1982 was collectible from the beneficiaries. This amounted to about $2 billion, a substantial potential outlay for Medicare enrollees; generally this outlay must be made out-of-pocket because the difference between actual and allowed charge is usually not covered by Medigap policies. We do not know, however, how much of the $2 billion was actually collected.

The assignment rate, the level of physician charges, and the amount of reduction by Medicare in submitted charges are all related; their relation points out the policy issues concerning Medicare payment of physicians. As suggested by the experience under the ESP, strict controls on physician charges may limit Medicare program outlays, but may shift the burden to the beneficiary by reducing assignment rates. On the other hand, many studies indicate that assignment rates would increase if the reasonable charge levels were raised. But this would increase program expenses. The challenge is to find ways to control the rate of increase in beneficiary liability and, at the same time, to hold down the rate of increase in program expenditures. Early data suggest the participating physician provisions of the Deficit Reduction Act have been successful in encouraging physicians to accept assignment.

Our understanding of physician decisionmaking about acceptance of assignment is limited. We know raising charge levels will raise assignment rates, but we have few other policy-relevant findings. More research is required into reasons for assignment rate variations among geographic areas and among specialties in order to formulate policies to reduce both beneficiary liability and program costs.

More research is also required to understand the effects of various factors on long-term trends in assignment rates and beneficiary liability: What, for example, is the effect of the increasing supply of physicians? And what is the effect of program changes to encourage HMO enrollment[5] by Medicare beneficiaries? Finally, data such as those presented in this article should be analyzed in the future to assess the impact of the assignment provisions of the Deficit Reduction Act on the assignment rate and on beneficiary liability.

[5]Assignment is not an issue for enrollees in HMO's because neither cost-reimbursed nor at-risk HMO's charge on a fee-for-service basis for in-plan services.

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