

Special Report

Impact of the Medicare prospective payment system for hospitals

by Stuart Guterman and Allen Dobson

This article describes some of the available evidence on the impact of the Medicare prospective payment system (PPS) for hospitals during its first year, on hospitals, other payers for inpatient hospital services, other providers of health care, and Medicare beneficiaries. In addition, because the impetus for the enactment of the new system stemmed from concern over the financial status of the Medicare program, the first-year impact of PPS on Medicare program expenditures is also described.

Overview

For several reasons, this article is devoted largely to a description, rather than a rigorous analysis, of PPS and its early impact. At this time, availability of data suitable for a rigorous analysis is limited. For example, we currently have no data on the impact of PPS on most private third-party payers for inpatient hospital care. Also, several data elements currently available in the Medicare Statistical System, such as discharge destination, were not available prior to PPS, and this makes the comparison of pre-PPS and post-PPS behavior difficult in some cases.

The widespread implementation of the new system presents an additional analytic problem, because there is no "control" group suitable for direct comparison with the "experimental" group of PPS hospitals. Furthermore, the gradual way in which PPS is being implemented implies a similarly gradual development of behavioral responses to the new system. Thus, it may be several years before the full impact of PPS is evident.

Moreover, we must take care not to attribute the changes occurring under PPS to the impact of the new system alone. The increasing supply of physicians and other market forces have created conditions that are encouraging many other innovations in the financing and provision of health care. Each of these innovations may make its own contribution to the changes that are being observed. The problem of attribution is one with which health services researchers will continue to contend over time.

Despite these analytic limitations, it is important to present and attempt to analyze the data that are currently available. Regardless of the attribution problem, the documentation of changes occurring under the new system is necessary to the evaluation and improvement of that system. Whether or not PPS

is the cause, we need to know whether these changes are desirable or undesirable, and whether they were expected or unexpected consequences of the system of incentives provided by PPS.

A list of some of the desirable and undesirable effects of PPS on the various groups of individuals and institutions subject to its impact is presented in Table 1. To the extent that the desirable effects are observed under the new system, we may feel confident that its objectives are being accomplished, regardless of causality. Similarly, to the extent that the undesirable effects are observed, remedial action may be indicated, again regardless of causality.

In any case, early data on PPS provide a baseline against which to evaluate future observations, and upon which to build a more rigorous analysis of the impact of the new system.

Hospital prospective payment

Background

Prior to the passage of Public Law 98-21, the Social Security Amendments of 1983, hospitals were reimbursed by Medicare on a retrospective cost basis. Under this system, hospitals were paid whatever they spent; there was little incentive to control costs, because higher costs brought about higher levels of reimbursement. Partly as a result of this system of incentives, hospital costs increased at a rate much higher than the overall rate of inflation.

Recognizing the inherently inflationary incentives provided by retrospective cost-based reimbursement, the U.S. Congress legislated several interim changes in the Medicare reimbursement system, as part of Public Law 97-248, the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA). In addition, the Department of Health and Human Services was directed to propose a plan for the prospective payment of hospitals under Medicare that would provide built-in incentives for hospital management efficiency. A report containing such a proposal was delivered to Congress in December 1982, and a prospective payment system (PPS) for Medicare inpatient hospital services was legislated in the spring of 1983. Implementation of PPS began on October 1, 1983.

Objectives

The most important overall objective of the new Medicare prospective payment system is to stem the growth in hospital costs while continuing to ensure the access of beneficiaries to quality health care. To achieve this objective, the system is designed to pay a single flat rate per type of discharge, as determined by the classification of each case into a diagnosis-related group (DRG). These DRG's are used to classify

Table 1
Expected impact of prospective payment system (PPS)

Impact measures	Providers and payers		
	Hospitals	Other payers for inpatient hospital services	Other providers of health care
Economic			
Anticipated benefits	Shorter hospital stays. Fewer unnecessary tests and services. Specialization—economies of scale. Adoption of cost-reducing technology. Improvements in hospital management. Improvements in hospital administrative data systems. Reduction of excess hospital capacity. Vertical integration of health care services.	Rapid diffusion of prospective payment and other innovative payment systems. Cost savings for all payers, with resulting reductions in health insurance premiums.	Increased provision of health care services in non-hospital settings. Increased number of discharges from inpatient to cheaper post-hospital care. Hospital acquisition of or contracting with other providers, leading to smoother provision of a continuum of patient care.
Unintended consequences	Increases in unnecessary admissions, readmissions, and transfers. Increases in hospital case-mix, due to changes in coding procedures—"DRG creep." Separate provision of services which previously were considered part of routine inpatient care—"unbundling." Increase in "outlier" cases. Higher expenditures on "pass-through" cost categories—capital, direct medical education, kidney acquisition. Excessive rate of hospital closings.	Potential shifting of cost burden to other payers for hospital services, with resulting increases in health insurance premiums or reductions in benefits. Increase in uncompensated care.	Pressure on physicians to change their practice patterns. Fewer in-hospital physician consultations. Increased frequency of minor surgical procedures. More severely ill patients discharged from inpatient to post-hospital care. Obstacles to providing a continuum of patient care, due to certificate-of-need restrictions, contracting prohibitions, etc.
Quality of care			
Anticipated benefits	Specialization—increase in efficiency and proficiency. Fewer unnecessary tests and services. More selective use of new technology.	Better coordination of health care treatment, payment, and coverage.	More efficient management of patient care. Increased skill levels for post-hospital provider personnel.
Unintended consequences	Increase in unnecessary admissions. Tendency toward premature discharges. Decreases in necessary testing and other ancillary services. Reluctance to adopt quality-enhancing (but expensive in the short run) technology.	Competing incentives to health care providers, depending on the type of coverage.	Fewer in-hospital physician consultations. More severely ill patients discharged from inpatient to post-hospital care.
Access to care			
Anticipated benefits	Availability of more services on a regional level. Shifting of services to more appropriate (and inexpensive) settings.	Reduced health care charges and insurance premiums. Better coordination of health care treatment, payment, and coverage. Increased sponsorship of health maintenance organizations and preferred provider organizations.	Increased availability of services in nonhospital settings.
Unintended consequences	"Dumping" of high-cost cases. Reluctance of hospitals to accept cases in DRG's which are not profitable.	Decrease in coverage for poor patients, due to uncompensated care issue.	Longer backlogs of patients waiting for post-hospital care.

Table 1—Continued
Expected impact of prospective payment system (PPS)

Impact measures	Medicare beneficiaries	Cost control	
		Hospital expenditures	Medicare program expenditures
Economic			
Anticipated benefits	Part A liability limited to legal deductibles and coinsurance.	Budget neutrality in the short run. Slower rate of growth in expenditures for the longer run. More predictable outlays.	Slower rate of growth in program expenditures.
Unintended consequences	Higher out-of-pocket costs, if Part B utilization increases.	Increased growth in "pass-through" costs.	Increased growth in expenditures for substitutes for inpatient care, to the extent that they are not offset by a decline in inpatient hospital expenditures. Increased growth in expenditures for post-hospital care, to the extent that they are not offset by a decline in acute care expenditures.
Quality of care			
Anticipated benefits	Shorter hospital stays. Lower rates of nosocomial infection. Fewer in-hospital complications and deaths. Fewer unnecessary tests and services. Reductions in iatrogenic care. Specialization—increase in efficiency and proficiency.	More efficient provision of hospital care.	More efficient provision of overall health care.
Unintended consequences	Tendency toward premature discharges. Decrease in necessary tests and services. Decrease in necessary physician consultations.	Replacement of quality with financial considerations as the objective of hospitals.	Replacement of quality with financial considerations as the objective of health care providers.
Access to care			
Anticipated benefits	Decrease in overall cost of services provided. Shift in treatment to more appropriate settings. Regional availability of broad range of services.	Reduction in the cost of hospital care. Promotion of the success of efficient hospitals.	Reduction in the total cost of health care. Encouragement of efficiency in the management of health care providers.
Unintended consequences	Selective exclusion of high-cost case types. "Dumping" of "unprofitable" types of patients.	Widespread hospital closings, particularly in underserved or poorer areas.	Reduction in acceptance of Medicare patients.

patients into groups that are clinically coherent and homogeneous with respect to resource use. Such a classification scheme allows for equitable payment across hospitals in that comparable services can be comparably remunerated.

From the perspective of the Medicare program, prospective payment rates have four essential characteristics:

- They are determined in advance and fixed for the fiscal period to which they apply.
- The payment rates for any individual hospital are not automatically determined by the level or pattern of its present or past incurred costs or charges.
- They constitute payment in full for the specific unit of service.

- Each hospital keeps, or loses, the difference between the payment rate and its cost for that unit of care.

These characteristics are intended to provide strong financial incentives for hospitals to control their input costs and resource use.

Prospective payment thus provides a potential solution to the problem of increasing hospital expenditures that threatens the solvency of the Medicare program. The success or failure of prospective payment will be determined by its ability to effect a suitable change in the behavior of those who manage the Nation's hospitals.

Design features

The prospectively determined rate for each DRG covers all Part A (hospital insurance) inpatient operating costs for such items as routine services, ancillary services, and intensive care that are generated by each case in that DRG. Furthermore, hospitals are prohibited from charging beneficiaries more than the statutory deductible and coinsurance amounts. Capital and direct medical education costs, kidney acquisition costs incurred by approved renal transplantation centers, and outpatient costs and Part B (supplementary medical insurance) inpatient costs continue to be reimbursed on a retrospective basis for the time being.

PPS applies to all hospitals participating in the Medicare program, except those hospitals or units specifically excluded, beginning with each hospital's first cost reporting period starting on or after October 1, 1983. To facilitate the transition to PPS, the new methodology is to be implemented over a 3-year phase-in period. During this phase-in period, a declining portion of the total prospective payment rate is to be based on the hospital's own historical costs. This hospital-specific rate is to be combined with a Federal rate, which, in turn, is a combination of the appropriate regional and national rates per discharge.

There are 18 different sets of regional rates, corresponding to urban and rural areas in each of the nine census divisions, and two sets of national rates, one each for urban and rural hospitals. Beginning with the fourth year of PPS (fiscal year 1987), Medicare payment for inpatient operating costs is to be fully determined by the urban or rural national rate per discharge. The transition for a typical hospital with cost reporting period beginning on January 1 is portrayed in Table 2.¹

Certain types of hospitals and units have been excluded from PPS, pending the development of suitable prospective payment mechanisms. Psychiatric, rehabilitation, children's, and long-term care hospitals are currently in this category, as are distinct-part psychiatric and rehabilitation units of acute care hospitals. In addition, a special exclusion has been provided for alcohol/drug treatment hospitals and units.²

Hospitals located outside of the 50 States and the District of Columbia are also currently excluded from PPS. Also, hospitals involved in demonstrations of alternative payment systems have been waived from inclusion in PPS.³ Certain types of hospitals are accorded special treatment under PPS, including sole community providers, regional referral centers, cancer

¹The U.S. Congress, in the legislation dealing with the Federal debt ceiling, has temporarily delayed the transition to the third-year blend of hospital-specific and Federal rates. Thus, whatever blend each hospital was subject to on September 30, 1985, is to apply pending resolution of the fiscal year 1986 budget.

²Excluded hospitals and units are reimbursed on a reasonable cost basis, subject to the TEFRA target rate ceiling.

³Maryland, Massachusetts, New Jersey, and New York were granted waivers from PPS at its outset. Massachusetts' and New York's waivers are due to expire during fiscal year 1986.

Table 2
Transition to national prospective payment system rates for a hospital with fiscal year ending December 31

Time period	Hospital-specific	Federal	Regional/National
	Percent		
Oct. 1983- Dec. 1983 ¹	—	—	—
Jan. 1984- Sept. 1984	75	25	25/0
Oct. 1984- Dec. 1984	75	25	18.75/6.25
Jan. 1985- Sept. 1985	50	50	37.5/12.5
Oct. 1985- Dec. 1985	50	50	25/25
Jan. 1986- Sept. 1986	25	75	37.5/37.5
Oct. 1986- Dec. 1986	25	75	0/75
Jan. 1987 onward	0	100	0/100

¹Not subject to prospective payment.

treatment and research centers, and Christian Science sanatoria.

Sole community hospitals are to be paid indefinitely at a rate equal to 75 percent of the hospital-specific rate plus 25 percent of the regional portion of the applicable Federal rate. During the PPS transition period, each such hospital may also receive an additional compensating payment if, because of circumstances beyond its control, it has experienced more than a 5-percent decrease in inpatient cases.

Regional referral centers are paid the applicable rates for urban hospitals in the same geographic region, except that the labor-related portion of the DRG rate is adjusted by the rural wage index (discussed in the following section) applicable to the hospital's location.

Cancer treatment and research hospitals are given the opportunity, during their first cost reporting period under PPS, to opt for reimbursement on a reasonable cost basis, subject to the TEFRA target rate ceiling.

Christian Science sanatoria are paid an amount based on their historical operating costs per discharge.

Prospective payment amounts

Prospective payment rates are determined by three components:

- A standardized payment amount, which represents the average operating cost for a typical Medicare inpatient stay, exclusive of case-mix, area wages, and teaching costs.
- A wage index, which represents the average wage level in each urban or rural area relative to the national average level across all areas.
- A weighting factor for each DRG, which represents the relative costliness of a hospital discharge in that DRG compared with the typical Medicare discharge.

In general, the prospective payment rate for a Medicare discharge in a particular hospital would be determined by first adjusting the standardized payment amount by the area wage index for the hospital's area and then multiplying by the weighting factor for the DRG into which the patient has been categorized.

Payments under PPS through fiscal year 1985 were structured to be "budget neutral" with respect to TEFRA; that is, they were to be no more and no less than those projected under the cost-per-case limits and rate-of-increase ceiling provisions contained in the TEFRA legislation.

In addition to the prospective payment rate per discharge, hospitals may receive other payments for Medicare Part A inpatient services. These additional payments may either be in recognition of the existence of certain conditions beyond the scope of PPS, or for "pass-through" costs that cannot yet appropriately be incorporated into the PPS mechanism. Included in the former category are payments for "outlier" cases (atypical cases requiring exceptionally long stays or generating exceptionally high costs compared with the overall distribution of cases in the DRG), Medicare bad debts, and indirect medical education costs. "Pass-through" costs include capital costs, direct medical education costs, and kidney acquisition costs.

Utilization and quality control

Each hospital under PPS is required to have entered into an agreement with a utilization and quality control peer review organization (PRO). The function of the PRO program, which was established under the Peer Review Improvement Act of 1982 (Subtitle C of Public Law 97-248, the Tax Equity and Fiscal Responsibility Act of 1982), is to provide for the review of:

- The validity of diagnostic and procedural information provided by the hospital.
- The completeness, adequacy, and quality of care.
- The appropriateness of admissions and discharges.
- The appropriateness of care for which outlier payments are made.

Thus, the PRO's are established as safeguards of the medical necessity, appropriateness, and quality of care. PRO findings of inappropriate or substandard care may result in denial of payment or, if a pattern of inappropriate or unnecessary care is found, in the termination of the hospital's Medicare provider agreement.

Payment cushions

Several features were incorporated into PPS to ease the transition from retrospective to prospective payment. The inclusion of a hospital-specific portion in the calculation of the prospective payment rates was intended to allow hospitals sufficient time to adjust to the fiscal pressures that they are expected to face under PPS. The inclusion of a regional

component allows for variations between areas in practice patterns and other factors that may determine per case costs, but may be beyond the control of the hospital in the short run. The additional payment for indirect medical education, based on the effect of teaching status on per case costs, was set at twice the empirically estimated rate to allow for possible imperfections in the patient classification system that might impose financial hardship on teaching hospitals. Several other allowances were made for types of hospitals that might be vulnerable under the new system.

By providing these "cushions," the designers of PPS have attempted to avoid much of the systemic trauma that might otherwise have been expected under a change as dramatic as that represented by the switch to prospective payment. In an evaluation context, however, these cushions have also made it that much more difficult to observe the full impact of the new system. This impact should thus continue to be monitored over time to more accurately assess the positive and negative effects of PPS.

System implementation

Coverage

By the end of September 1984, a total of 5,405 hospitals (81 percent of all Medicare-participating hospitals) were operating under PPS. This number represents virtually 100 percent of "PPS-eligible" hospitals (that is, short-stay acute care hospitals subject to the new payment system). Because Medicare prospective payment began with the start of the hospital's cost reporting year, rather than the Federal fiscal year, the number of PPS hospitals increased throughout the first year. As shown in Figure 1, only a little more than one-half of all PPS-eligible hospitals were subject to prospective payment by January 1, 1984. There was a jump in PPS coverage in July 1, 1984, when almost one-third of PPS-eligible hospitals came under the new system. Through September 1984, 45 percent of bills from PPS-eligible hospitals processed by the Health Care Financing Administration had been paid under PPS.

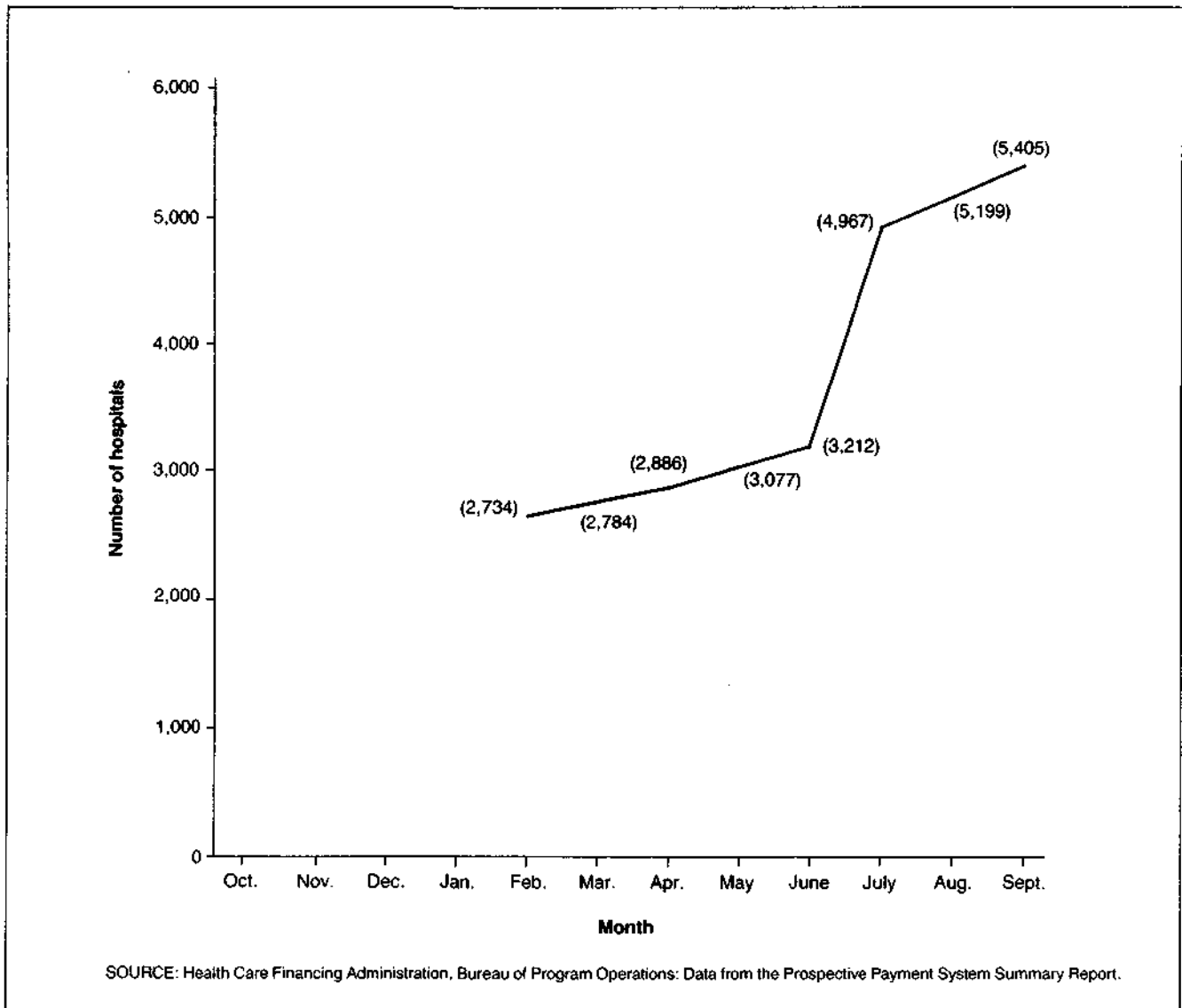
A number of hospitals and distinct-part units of certified hospitals have applied for and received exclusions from prospective payment. As of September 1984, the following were excluded from prospective payment:

- 552 short-stay hospitals in waiver States.
- 439 psychiatric hospitals, and 722 psychiatric units.
- 49 rehabilitation hospitals, and 308 rehabilitation units.
- 25 alcohol/drug hospitals, and 216 alcohol/drug units.
- 83 long-term care hospitals.
- 47 children's hospitals.

In addition to hospitals and units with exclusions from PPS, several other types of hospitals receive

Figure 1

Hospitals covered under the prospective payment system, through end of each month: Fiscal year 1984



special consideration under the new system. As of September 1984, these include:

- 304 hospitals that have been determined to be the sole source of inpatient hospital services reasonably available to Medicare hospital insurance (Part A) beneficiaries in a geographic area.
- Six hospitals meeting the requirements for classification as regional referral centers.
- Four hospitals involved extensively in treatment for and research on cancer.
- Six hospitals that previously allowed extensive direct billing under Medicare supplementary medical insurance (Part B).

In addition, Christian Science sanatoria are eligible for special treatment under PPS.

Peer review activity

Contracts establishing 54 PRO's (one for each State, the District of Columbia, Puerto Rico,

Guam/American Samoa, and the Virgin Islands) were signed by the legislatively mandated deadline of November 15, 1984. By September 1984, more than 1.1 million PPS admissions had been reviewed by a PRO, or other medical review entity, for medical necessity and appropriateness of treatment and setting.

First-year findings

Overview

The focus of this article is the impact of PPS on hospitals, other payers for inpatient hospital services, other providers of health care, and Medicare beneficiaries, as well as Medicare program expenditures. Although many of the hypothesized effects listed in Table 1 cannot be addressed here, we have attempted to describe the pattern of changes

Table 3

Medicare short-stay hospital admissions, rate per 1,000 hospital insurance enrollees, and percent change: 1978-84

Year	Admissions in thousands	Percent change	Enrollment in thousands as of July 1	Admissions per 1,000 enrollees	Percent change
Calendar year:					
1978	9,444	—	26,777	353	—
1979	9,788	+3.6	27,459	356	+0.8
1980	10,430	+6.6	28,067	372	+4.5
1981	10,858	+4.1	28,590	380	+2.2
Fiscal year:					
1982	11,220	+3.3	29,069	386	+1.6
1983	11,696	+4.2	29,587	395	+2.3
1984	¹ 11,495	-1.7	² 30,141	381	-3.5

¹ Admissions data for fiscal year 1984, are adjusted to account for processing lags.

² Enrollment figures for July 1, 1984, as projected by the Bureau of Data Management and Strategy.

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

occurring under PPS. This pattern, it is hoped, will enable us to form some general conclusions about the response of the health care sector to the new payment system.

Impact on hospitals

When PPS was enacted, it was anticipated that the new system, in paying on a per case rather than on the previous per diem basis, would provide an incentive for hospitals to increase the volume of admissions. Since each extra admission generates additional revenue for the hospital, it was thought that financial considerations would encourage the admission of any case for which the cost of treatment is expected to be less than the relevant DRG payment rate. In addition, with the expected decrease in average length of stay, an incentive would exist to fill the rising number of empty beds.

The annual number of Medicare short-stay hospital admissions for the period 1978-84, and the rate of admissions per 1,000 Part A enrollees are shown in Table 3. Medicare admissions steadily rose during the entire period prior to the implementation of PPS, with the annual increase never falling below 3.3 percent. The figures for fiscal year 1984, however, indicate a decrease in admissions of 1.7 percent, which is quite contrary to *a priori* expectations, as well as previous experience. The fiscal year 1984 decrease in admissions per 1,000 enrollees was estimated at 3.5 percent. It appears that the increase in admissions that was anticipated in response to PPS has not materialized.

The reason for this reversal in the historical trend toward increasing admissions is not clear at this time. However, it may reflect the changing role of the hospital in our health care system, with an increasing emphasis on ambulatory care, as rising inpatient costs make it desirable and improvements in technology make it feasible to provide more health care in alternative settings.

The most commonly accepted expectation about PPS at the time of its inception was that it would

Table 4

Average length of stay for Medicare beneficiaries in short-stay hospitals and percent change: 1967-84

Year	Average length of stay ¹	Percent change
Calendar year:		
1967	13.8	—
1968	13.8	0.0
1969	13.5	-2.2
1970	13.0	-3.8
1971	12.5	-3.9
1972	12.1	-3.2
1973	11.7	-3.3
1974	11.5	-1.7
1975	11.2	-2.6
1976	11.1	-0.9
1977	10.9	-1.8
1978	10.8	-0.9
1979	10.7	-0.9
1980	10.6	-0.9
Fiscal year:		
1981	10.5	-0.9
1982	10.3	-1.9
1983	10.0	-2.9
1984	² 9.1	-9.0

¹ Data for calendar years 1967-80 refer to aged beneficiaries only. The omission of other Medicare beneficiaries may result in an overstatement of approximately 0.1 days in annual length of stay for these years in this table.

² Based on records processed through September 1984.

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

result in shorter stays for Medicare patients. Reduced length of stay was, in fact, to be one of the major vehicles through which hospital costs were to be controlled under PPS.

Annual data on average length of stay for Medicare beneficiaries for the period 1967-84 are presented in Table 4. Length of stay had been steadily declining during the 15-year period prior to PPS, and the decline during fiscal year 1983 (when TEFRA provisions were in effect) was the largest in 10 years. The drop in length of stay during the first year of PPS, however, indicates a substantial acceleration of this trend. The largest previous annual decline in the

history of the Medicare program was less than 4 percent, whereas length of stay dropped by 9 percent in fiscal year 1984. In absolute terms, length of stay declined by almost 1 full day in fiscal year 1984, compared with the largest pre-PPS drop of only one-half day.

Figure 2 graphically depicts the downward trend in Medicare length of stay. The actual length of stay for fiscal year 1984 (9.1 days) was substantially lower than the length of stay that would have been projected from previous experience (9.6 days). This finding would appear to confirm *a priori* expectations as to the impact of PPS.

In a study by the Rand Corporation (Carter and Ginsburg, 1985), it was found that the Medicare Case-Mix Index (CMI) for PPS cases in fiscal year 1984 was 8.4 percent higher than the CMI in 1981, exceeding the estimates that had been made when the new system was implemented. This CMI increase was decomposed into the components shown in Table 5. The Rand study found that most of the CMI increase was accounted for by changes in documentation and coding, including improvements in data collection by the Medicare program. Medical practice changes were also found to have accounted for a substantial portion of the increase.

Other dramatic changes in hospital behavior are being observed under PPS. With decreases in both admissions and length of stay, hospitals are experiencing the lowest occupancy rates in memory. For fiscal year 1984, the American Hospital Association (1984b) reported an average occupancy rate of 67.7 percent, down from 73.7 percent for the previous year. Not surprisingly, hospital staffing levels also dropped 2.0 percent.

At the same time, hospitals have reported sharp increases in profits. Surplus revenue (the difference between income and expenses associated with treating patients) for all U.S. hospitals more than doubled during 1984, with for-profit hospitals reporting a 44-percent increase in net income (Waldholz, 1985). In addition, an analysis of a sample of 1984 Medicare Cost Reports by the Inspector General of the Department of Health and Human Services indicates that PPS payments were an average of 14 percent greater than operating costs for Medicare patients (Kusserow, 1985). This increase in profitability, at a time when occupancy rates are falling, indicates that the Nation's hospitals are responding rapidly to the changing environment in the health care sector. Although some portion of this revenue surplus may be transitory, disappearing as the PPS payment "cushions" previously described are eliminated and as fiscal pressure from other third-party payers increases, it is a clear indication of the extent to which most hospitals have control over the costs that they incur.⁴

⁴Although hospitals are generally more profitable, the American Hospital Association reports that 18 percent of all hospitals experienced revenue deficits during 1984. Many of these hospitals are small rural facilities, without much flexibility in planning their budgets, and urban public hospitals, which treat a large proportion of uninsured patients.

Impact on other payers

The Medicare program accounts for some 27 percent of all expenditures on hospital care in the United States, clearly establishing Medicare as the largest single consumer of hospital services (Gibson, Waldo, and Levit, 1983). Given the dominant role played by Medicare, and the dramatic change in the way that Medicare pays for hospital services under PPS, it would not be unreasonable to expect that the entire hospital payment environment might be altered by the new system. Among those most likely to be directly affected by such a change are those who pay the bulk of the remaining portion of the Nation's hospital bill, the most prominent of these being the State Medicaid programs (on the public side) and the Blue Cross/Blue Shield plans (on the private side).

With the enactment of Public Law 97-335, the Omnibus Budget Reconciliation Act of 1981 (OBRA), the authority of the States to modify their methods of hospital payment was expanded. This authority relieved the States of the requirement that their Medicaid programs follow Medicare's retrospective reasonable cost-based reimbursement principles, and enabled them to tailor their programs more specifically to their own policy needs. Following the enactment of OBRA, several States began experimenting with prospective payment and other alternatives to retrospective reimbursement.⁵

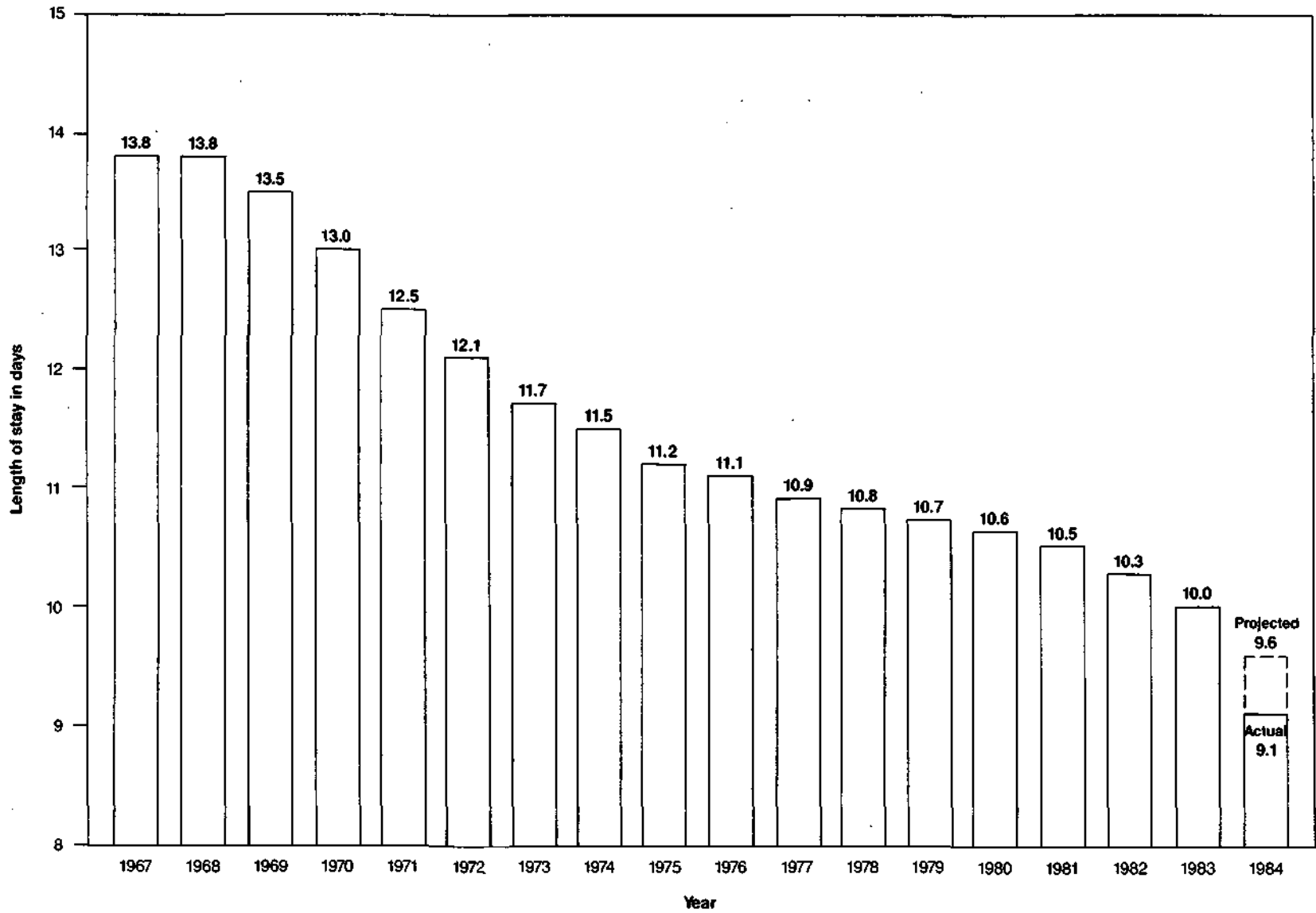
With the implementation of PPS, States' activities in modifying their hospital payment methodologies have accelerated. A study of the 54 State and territorial Medicaid programs found that, as of October 1984, 33 States and one territory had some form of prospective payment methodology in effect for hospital inpatient services (Bill et al., 1984). As shown in Table 6, only four of these States—New Jersey, Ohio, Pennsylvania, and Utah—had followed Medicare in adopting DRG's as the basis of payment.⁶ However, Michigan, South Dakota, and Washington had developed DRG-based systems that were about to be implemented, and other States reportedly considering the implementation of such systems included Connecticut, Indiana, Minnesota, North Carolina, Oregon, and Wyoming.

Data on recent trends in Medicaid utilization and expenditures from a study at Brandeis University (Singer, 1985), indicate decreases in the number of Medicaid users of inpatient hospital services and in the rate of growth of Medicaid payments for inpatient hospital services. These trends are consistent with trends in Medicare utilization and expenditures presented in this article, and suggest that the changes

⁵Several statewide demonstrations of alternatives to the retrospective reasonable cost-based payment systems had been authorized during the years prior to OBRA, under the authority of the Social Security Amendments of 1972. In fact, experience with these State programs provided important input toward the development of PPS.

⁶The New Jersey system preceded the Medicare PPS. In addition, Georgia attempted a DRG-based system during the early 1980's, but abandoned it after 2 years.

Figure 2
Medicare length of stay: 1967-84



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

Table 5
Increase¹ in Medicare Case-Mix Index, by
component: Fiscal year 1984

Component	Percent
Total ²	8.4
Medical practice changes	2.1
Pre-PPS ³ trend	1.4
Shifts to outpatient settings	0.7
Aging of the beneficiary population	0.0
Coding practice changes	6.2
PPS-induced ³	2.8
Improvements in data quality	3.3

¹ Since 1981.

² These percentages are multiplicative, rather than additive, so the components do not necessarily add up to the total.

³ Prospective payment system.

Table 6
Prospective payment-type methodologies in
State and territorial Medicaid
programs: October 1984

Type	States/Territories
Diagnosis-related-group-based	New Jersey Ohio Pennsylvania Utah
Per diem	Alabama California Colorado Illinois Iowa Kansas Kentucky Maryland Mississippi Missouri Nebraska New York North Carolina Oklahoma Tennessee Virginia Guam
Budget review	Alaska Florida Maine Massachusetts Michigan Rhode Island Washington
Other	Arizona Georgia Idaho Montana Nevada Oregon

SOURCE: (Bell et al., 1984).

occurring in the health care sector may be broader than can be accounted for by PPS alone.

Blue Cross was begun in 1929 as a prepayment plan for hospital care for some 1,000 employees of Baylor

University. The first Blue Shield plan, designed as a complementary prepayment plan for physicians' services, was organized 10 years later. From these modest beginnings, the Blue Cross and Blue Shield system has grown to 75 autonomous plans in the United States, Puerto Rico, Canada, and Jamaica. By 1982, nearly 86 million people had hospital insurance protection under Blue Cross and Blue Shield plans (Health Insurance Association of America, 1983).

Collectively, these plans comprise a large share of the hospital services market. However, because each plan is an independent organization, no standard subscriber contract or universal payment methodology can be attributed to Blue Cross/Blue Shield. Historically (prior to the enactment of Medicare prospective payment), however, the majority of these plans have used cost-based reimbursement methods, with the remainder using charge-based systems.

With the implementation of PPS, some Blue Cross and Blue Shield plans have adopted prospective pricing systems that use DRG's, but the American Hospital Association (1984a) reported that "there is no 'big push' by the plans toward the use of this particular mechanism." In addition, some plans have adopted prospective pricing, but without DRG's, and others utilize DRG's, but not within a prospective pricing system. The American Hospital Association also noted a recent trend toward the development of health maintenance organizations (HMO's) and preferred provider organizations (PPO's) by Blue Cross and Blue Shield plans.

Plans in Arizona, Kansas, Nebraska, and Oklahoma presently use some form of DRG-based payment, and the Florida and Michigan plans have pilot programs using DRG's. New Jersey has an all-payer DRG-based system. Several other plans use some form of prospective pricing, including Arizona, Connecticut, Michigan, Minnesota, Rhode Island, and Iowa. The use of prospective pricing in Massachusetts and New York is mandated by State law.

By the end of 1984, Blue Cross and Blue Shield plans were administering 20 PPO's, and the number was expected to grow to 44 by the end of 1985 (Blue Cross and Blue Shield Association, 1985). In addition, a total of 40 Blue Cross and Blue Shield plans were operating 57 HMO's at the end of 1983, with more than 1.5 million members. By the end of 1984, the number of these HMO's had increased to 62, with a membership of 2 million.

Preliminary results from one study (Scheffler and Gibbs, 1985) show that, since October 1983, hospital admission rates per 1,000 Blue Cross/Blue Shield members and days per 1,000 members have declined at rates exceeding those for Medicare beneficiaries. There has also been a decline in average length of stay for Blue Cross/Blue Shield members, but that decline has been less rapid than that for Medicare beneficiaries. The overall financial impact has been to reduce Blue Cross/Blue Shield hospital inpatient payments. The causes of these changes have not been

ascertained, but several factors are being considered in the study, including:

- Cost and utilization controls being used by Blue Cross/Blue Shield plans, as well as alternate delivery systems such as Blue Cross/Blue Shield PPO's and HMO's.
- Changes in payment systems being used by the States.
- The impact of PPS.
- Other changes in the overall structure of the health care system.

Although the organizational response of other third-party payers for hospital services has been mixed, with the Medicaid programs showing a tendency to move toward prospective payment and the Blue Cross and Blue Shield plans investigating other cost-containment strategies, the overall picture that is presented is the same. A dramatic change is occurring within the health care sector, and new payment strategies are at the center of that change. The interactions among these strategies, and their effects on the health care sector, will continue to be a topic of study in the coming years.

Impact on other providers

As hospitals respond to the system of incentives created by PPS, their decisions regarding the treatment of Medicare patients may have an impact on other providers of health care, particularly physicians and nursing homes.

Currently, physician payment is based on Medicare customary and prevailing charge schedules, with increases in Medicare payment rates limited by the Medicare Economic Index. Therefore, the incentives provided by prospective payment do not apply directly to physicians. However, some preliminary results from a pretest for HCFA's Physicians' Practice Costs and Incomes Survey indicate that some effect is being felt by physicians. Responses of the pretest Survey sample, which included some 200 physicians in five States, to a question on recent pressures by hospital management to change their patient management behavior are presented in Table 7. These results are consistent with the expectation that, under prospective payment, hospitals would encourage physicians to reduce ancillary services, shorten hospital stays, and increase outpatient testing. An increased tendency to treat patients in nonhospital settings might also help to explain the surprising decrease in admissions under PPS.

SNF's are currently reimbursed for routine costs per Medicare patient day, subject to an upper reimbursement limit, with hospital-based SNF's having higher limits than do freestanding SNF's. With hospitals seeking to reduce lengths of stay for Medicare patients under PPS, an increase is anticipated in the rate of transfer of Medicare cases to long-term care providers. Data on SNF admission notices show a slight acceleration in the projected rate of increase in SNF admissions during fiscal year 1984. Although the rate of increase in SNF admission

notices processed by HCFA for the previous two fiscal years was 4.7 percent, the projected rate of increase for fiscal year 1984 was 5.7 percent.

These preliminary indications appear to reveal a tendency under PPS to increase the care provided to patients in other than inpatient settings. To the extent that this tendency reflects an improvement in the coordination of health care provision among providers in ambulatory, inpatient, and long-term care settings, PPS may be seen as encouraging overall efficiency in the health care sector. To the extent that it represents a reluctance on the part of hospitals to offer patients the amount of care that they require, PPS may be seen as an impediment to necessary health care. To date, there is no systematic evidence that access to needed care has been hampered by PPS. This issue, however, will continue to be monitored as better data become available.

Impact on Medicare beneficiaries

Among the major concerns under PPS is the continued access of Medicare beneficiaries to appropriate health care, and the maintenance of the quality of care provided to these beneficiaries. The issues of access and quality are particularly important to certain groups within the Medicare population, such as the disabled (especially the aged disabled), renal patients, the very old, and the aged poor, each of whom have special health and socioeconomic

Table 7
Response to question from Physician's Practice Costs and Incomes Survey pilot test: 1984

Type of physician and suggestion	Number		Percent yes
	Yes	No	
Question: Since this time last year, has the hospital administrator, chief of medicine, or any other medical staff suggested that you . . .			
All physicians			
Increase admissions	21	137	13
Decrease Medicare admissions	5	151	3
Increase Medicare admissions	2	154	1
Concentrate on admitting certain diagnosis-related groups	3	155	2
Reduce ancillaries	25	133	16
Shorten length of stay	58	99	37
Radiologists, anesthesiologists, and pathologists			
Reduce ancillaries	3	29	9
Constrain expensive diagnostics	4	28	13
Encourage outpatient testing	16	16	50

SOURCE: National Opinion Research Center: *Physicians' Practice Costs and Incomes Survey: Final Pretest Report*. HCFA Contract No. 500-83-0025. Prepared for Health Care Financing Administration, Chicago, Ill. Sept. 1984.

characteristics that make them particularly vulnerable to the incentives provided by the new payment system. Because these groups are likely to require more intensive (and thus more expensive) care for a given type of inpatient episode, hospitals may tend to view them as potential money losers under prospective payment.

On the other hand, certain incentives under PPS may serve to encourage improvements in access and quality. Because improved management is encouraged, the effectiveness of health care may be enhanced. Greater integration of health care delivery under PPS may result in the provision of more appropriate and effective care. Hospitals are also encouraged to specialize in services and procedures that they provide most efficiently, which may improve outcomes in certain cases, as found in several studies (Luft, 1980; Flood, Scott, and Ewy, 1984a and 1984b; Lubitz, Riley, and Newton, 1985). In addition, the incentive to eliminate unnecessary services should result in an improvement in the quality of care. Moreover, shorter hospital stays should reduce the risk of nosocomial infection and other iatrogenic events to which the elderly are especially vulnerable.

The major provision for the monitoring of access and quality under prospective payment is the PRO program. This program represents an effort by HCFA to intensify the review of Medicare claims to ensure that the care rendered by the hospital is necessary, appropriate, and of acceptable quality. Each PRO is required to be accountable for three admission and five quality objectives (with certain exceptions in waiver States and exempt areas).

The admission objective areas are:

- Shifting of inappropriate inpatient admissions to outpatient settings.
- Reduction of unnecessary admissions and procedures.
- Reduction of unnecessary admissions by specific hospitals and physicians.

The quality objective areas are:

- Reduction of unnecessary admissions.
- Reduction of mortality rates for specific "problem" procedures.
- Reduction of unnecessary invasive procedures.
- Assurance that patients will receive complete treatment and adequate ancillary services.
- Reduction of post-procedural complications.

As stated earlier, contracts establishing 54 PRO's were signed by November 15, 1984.

In addition to the PRO program, HCFA's survey and certification program is designed to ensure that hospitals and skilled nursing facilities (SNF's) are in compliance with the health and safety requirements of the conditions of participation in the Medicare program. Of the approximately 6,800 Medicare participating hospitals, the individual States survey about 1,500 for compliance with the Medicare requirements. The remaining hospitals, accredited by the Joint Commission on the Accreditation of Hospitals (JCAH), are, by law, deemed in compliance by virtue of their JCAH accreditation.

In anticipation of the increased need for monitoring the provision of health care under PPS, the conditions of participation are being revised to place more emphasis on outcome-oriented criteria. In particular, a new quality assurance condition has been proposed that would require hospitals to have an effective program to identify and resolve problems that affect the quality of patient care. In addition, a number of previously existing requirements that specify procedures for ensuring quality have been incorporated into the proposed quality assurance condition, in the belief that a focused requirement will be a better vehicle through which to address the quality of care.

The Office of the Inspector General (OIG) of the Department of Health and Human Services is also working to monitor access and quality under the PPS by:

- Identifying providers who may be engaged in fraudulent or abusive practices.
- Evaluating the effects of reimbursement and coverage policy on selected health care services.
- Measuring HCFA's effectiveness in monitoring its contractors (such as the PRO's) in assuring appropriate payments under its programs.

Additional activities may be undertaken by OIG as new priorities arise.

A number of studies are currently under way for the purpose of evaluating the impact of PPS on access and quality. These studies are to focus on indicators of access and quality such as the availability of services by hospital, utilization patterns of Medicare beneficiaries, in-hospital and post-discharge mortality rates, rehospitalization rates, transfers between hospitals, and discharges to post-hospital care. In addition, several studies are to focus on methods for measuring the quality of inpatient care.

At present, there are no objective data indicating that access to care has diminished or that quality of care has declined as a result of the implementation of PPS.

Within HCFA's Office of Research and Demonstrations, data on trends in admissions, length of stay, and total days of hospital care by beneficiary group have been examined, and it was found that the general decreases in those indicators observed in 1984 do not appear to be concentrated among any one group of beneficiaries (Eggers, 1985). Although total days of hospital care per 1,000 beneficiaries decreased in fiscal year 1984 after remaining relatively constant in recent years, this decrease was spread evenly across beneficiary groups (Table 8). These analyses provide no indication of an access problem for particular patient groups.

As previously discussed, there is evidence of some increase in the rate of hospital discharges to post-hospital care, but the impact of this increase on access or quality has not yet been ascertained. The changes that have been observed during the first year of PPS imply that hospitals are adjusting to the new system, and that this adjustment has been fairly smooth. The careful and systematic assessment of the impact of

Table 8
Total days of hospital care per 1,000 Medicare beneficiaries and annual percent change, by sex, race, and age: 1980-84

Sex, race, and age	Year ¹					Annual percent change 1980-83	Annualized percent change 1983-84 ²
	1980	1981	1982	1983	1984		
	Days of care per 1,000 beneficiaries						
Total	3,805	3,734	3,847	3,922	3,373	-0.2	-14.2
Sex							
Male	3,985	3,907	3,982	3,936	3,515	-0.4	-14.0
Female	3,682	3,619	3,757	3,683	3,277	0.0	-14.4
Race							
White	3,819	3,745	3,846	3,782	3,373	-0.3	-14.2
All other	4,895	4,840	5,127	5,063	4,501	+1.1	-14.5
Age							
65-69 years	2,692	2,637	2,652	2,607	2,287	-1.1	-16.0
70-74 years	3,407	3,335	3,433	3,369	3,008	-0.4	-14.0
75-79 years	4,336	4,245	4,384	4,321	3,851	-0.1	-14.2
80-84 years	5,216	5,171	5,327	5,209	4,643	0.0	-14.2
85 years or over	5,914	5,757	6,012	6,919	5,320	0.0	-14.3

¹Data are for calendar years 1980-83 and fiscal year 1984.

²Because calendar year 1983 ended in December 1983 and fiscal year 1984 ended in September 1984, the percent change between the figures for these two periods was adjusted to reflect the rate of change on an annual basis.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare provider analysis and review files.

Table 9

Estimated Medicare benefits payments and percent change, by type of provider: Fiscal years 1967-84

Fiscal year	Inpatient hospital		Outpatient hospital ¹		Physician ²		Skilled nursing		Home health ³	
	Amount in millions	Percent change	Amount in millions	Percent change	Amount in millions	Percent change	Amount in millions	Percent change	Amount in millions	Percent change
1967	\$2,393	—	\$15	—	\$629	—	\$97	—	\$21	—
1968	3,348	+39.9	40	+166.7	1,304	+107.3	344	+254.6	60	+185.7
1969	4,239	+26.6	67	+67.5	1,516	+16.3	367	+6.7	77	+28.3
1970	4,452	+5.0	93	+36.8	1,814	+19.7	298	-18.8	89	+15.6
1971	5,182	+16.4	137	+47.3	1,831	+0.9	214	-28.2	76	-14.6
1972	5,887	+13.6	174	+27.0	1,996	+9.0	174	-18.7	84	+10.5
1973	6,412	+8.9	175	+0.6	2,118	+6.1	179	+2.9	100	+19.0
1974	7,513	+17.2	319	+82.3	2,426	+14.5	214	+19.6	138	+38.0
1975	9,947	+32.4	509	+59.6	3,065	+26.3	273	+27.6	228	+65.2
1976	11,742	+18.0	717	+40.9	3,690	+20.4	308	+12.8	339	+48.7
1977	14,265	+21.5	953	+32.9	4,599	+24.6	351	+14.0	441	+30.1
1978	16,684	+17.0	1,184	+24.2	5,327	+15.8	354	+0.9	543	+23.1
1979	19,067	+14.3	1,445	+22.0	6,397	+20.1	364	+2.8	647	+19.2
1980	22,842	+19.8	1,809	+25.2	7,814	+22.2	387	+6.3	772	+19.3
1981	27,744	+21.5	2,215	+22.4	9,513	+21.7	424	+9.6	959	+24.2
1982	32,729	+18.0	2,916	+31.6	11,392	+19.8	454	+7.1	1,176	+22.6
1983	36,083	+10.2	3,342	+14.6	13,498	+18.5	500	+10.1	1,545	+31.4
1984	39,050	+8.2	3,739	+11.9	14,936	+10.7	545	+9.0	1,898	+22.8

¹Includes payments for routine maintenance dialysis treatments since fiscal year 1974.

²Includes payments for durable medical equipment, ambulance, and several other nonphysician services covered under Medicare supplementary medical insurance.

³Includes benefits paid under Medicare hospital insurance and supplementary medical insurance.

SOURCE: Health Care Financing Administration, Office of the Actuary: Data from the Division of Medicare Cost Estimates.

Table 10

**Average annual rates of increase in estimated Medicare benefit payments, by type of provider:
Fiscal years 1973-84**

Type of provider	1973-82		1982-83		1983-84	
	Actual	Real ¹	Actual	Real ¹	Actual	Real ¹
	Percent					
Inpatient hospital	+ 19.9	+ 10.0	+ 10.2	+ 6.8	+ 8.2	+ 3.8
Outpatient hospital	+ 36.7	+ 25.5	+ 14.6	+ 11.0	+ 11.9	+ 7.3
Physician	+ 18.8	+ 8.9	+ 18.5	+ 14.8	+ 10.7	+ 6.2
Skilled nursing	+ 8.7	- 0.3	+ 10.1	+ 7.0	+ 9.0	+ 4.2
Home health	+ 26.9	+ 16.4	+ 31.4	+ 27.3	+ 22.8	+ 17.8

¹Deflated by the Consumer Price Index for "all items."

SOURCE: Health Care Financing Administration, Office of the Actuary. Data from the Division of Medicare Cost Estimates.

PPS on access and quality is and will continue to be a crucial aspect of the evaluation of the new payment system.

Impact on Medicare expenditures

The principal motivation of Congress in enacting prospective payment for Medicare inpatient hospital services was to constrain the depletion of the Medicare Trust Funds, therefore, a primary indicator of the success or failure of PPS would be its effect on the volume and rate of growth in Medicare program expenditures.

The growth of Medicare benefit payments by type of provider over the history of the program is shown in Table 9. Inpatient hospital payments have risen from about \$2.4 billion in fiscal year 1967 to more than \$39 billion (estimated) in fiscal year 1984. The apparent effect of recent efforts to control the increase in Medicare hospital expenditures is shown in Table 10. From fiscal year 1974 (after temporary wage and price controls were removed) through fiscal year 1982 (the last year prior to the imposition of TEFRA restrictions), Medicare inpatient hospital benefit payments increased at an annual rate of 19.9 percent (10 percent in real terms), never falling below 14.3 percent in any given year. Under TEFRA (during fiscal year 1983), this rate of increase was only 10.2 percent (6.8 percent in real terms), lower than at any time in the previous 10 years. Furthermore, the estimated rate of increase under PPS (during fiscal year 1984) was lower still, at 8.2 percent (3.8 percent in real terms), among the smallest percent increases in the program's history.

The historical pattern of Medicare benefit payments for outpatient hospital services⁷ represented in Table 9 shows that outpatient hospital payments grew from \$319 million in fiscal year 1974 to an estimated \$3.7 billion 10 years later, with the annual rate of increase

never falling below 14.6 percent from fiscal year 1974 through fiscal year 1983. In fiscal year 1984, however, estimated outpatient hospital payments grew by less than 12 percent, the smallest percentage increase since fiscal year 1973. As shown in Table 10, the pre-TEFRA annual rate of increase in outpatient hospital payments was substantially higher than that under TEFRA and PPS. In fact, in both nominal and real terms, the most recent increase represents the smallest percentage change for any 2-year period in the program's history. Despite this fact, however, estimated Medicare outpatient hospital benefit payments outgrew inpatient hospital payments for the eleventh consecutive year in fiscal year 1984.

As shown in Table 9, Medicare benefit payments for physician services⁸ have increased from \$629 million in fiscal year 1967 to an estimated \$14.9 billion in fiscal year 1984, an increase of almost 2,300 percent. Even in real terms, physician payments are almost eight times as high now as they were in fiscal year 1967. From fiscal year 1975 through fiscal year 1983, the annual increase in this component of Medicare payments was never smaller than 15 percent. Although the estimated increase of 10.7 percent in fiscal year 1984 was the smallest in 11 years, it was also greater than the increase in the inpatient hospital component for the sixth consecutive year. A change in the pattern of growth in Medicare payments for physician services is apparently reflected in Table 10, but the extent to which this is a result of the physician payment "freeze" that was in effect for part of the PPS year is unclear. Effective July 1, 1984, a temporary "freeze" was put on Medicare physician services payment rates, under the provisions of Public Law 98-369. This freeze would have had the effect of dampening the increase in Medicare benefit payments for physician services.

As previously mentioned, one of the anticipated effects of PPS incentives was that they would encourage hospitals to discharge patients to post-hospital care more frequently and at an earlier stage of recuperation. It would then be expected that skilled

⁷Since fiscal year 1973, expenditures in the outpatient services category, as estimated by HCFA's Office of the Actuary, includes benefits for routine maintenance dialysis treatments for ESRD patients. In fiscal year 1983, these benefits accounted for more than 40 percent of all Medicare outpatient services payments. Constraints arising from the revised payment method for ESRD services may thus have had a strong effect in limiting the overall growth of this category.

⁸Physician services payment, as estimated by HCFA's Office of the Actuary, includes payments for durable medical equipment, ambulance services, medical supplies, and other eligible services associated with the provision of physician services.

nursing payments would rise under PPS. As shown in Table 9, the growth in skilled nursing payments has accelerated somewhat in the past 2 years, at an average real rate of 5.6 percent, compared with a decrease in real terms over the pre-TEFRA period. This rate of increase, however, is only slightly greater than that for inpatient hospital payments.

Medicare payments for home health services have increased rapidly in recent years (Table 9). Since fiscal year 1973, the annual increase in this component of Medicare payments has never been below 19 percent. In fact, except for the period of temporary wage and price controls from 1971 to 1974, the annual growth in home health payments has never been less than 15 percent. The growth of home health payments may be contrasted with that of skilled nursing payments. Although the amount of home health payments was barely one-sixth that of skilled nursing payments in fiscal year 1968, 16 years later, home health payments were almost four times as high as skilled nursing payments. One factor in the growth of Medicare home health payments was the Omnibus Reconciliation Act of 1980 (Public Law 96-499). This Act liberalized home health benefits under Medicare by providing for the coverage of an unlimited number of home health visits (as opposed to the previous limit of 100 visits during a benefit period) and eliminating the 3-day prior hospitalization requirement as a condition for the receipt of services.

As illustrated in Table 10, the growth rate of home health payments seems to have continued at the pre-TEFRA level or higher. Home health payments increased at a somewhat higher rate than did inpatient hospital payments during the pre-TEFRA period. Under PPS, the estimated growth has accelerated to a

rate about 4.5 times as high as that for inpatient hospital payments and more than twice as high as that for any other major benefit category. These figures seem consistent with expectations about the growth of post-hospital care under PPS.

Total Medicare benefit payments increased from \$3.2 billion in fiscal year 1967 to \$49.1 billion in fiscal year 1982, as shown in Table 11. This represents an increase of 20 percent per year over that time period, or 11.8 percent per year in real terms. Medicare benefit payments per beneficiary also grew steadily during the pre-TEFRA period, from \$162 in fiscal year 1967 to \$1,666 in fiscal year 1982. This represents an average annual increase of 16.8 percent, or 8.8 percent in real terms.

More recently, the growth in Medicare benefit payments appears to be more moderate, according to the figures presented in Table 12. Benefit payments under both Medicare hospital insurance (HI) and supplementary medical insurance (SMI) grew at annual rates of more than 20 percent during the pre-TEFRA period. However, the growth rate of HI benefit payments was sharply reduced under TEFRA, and both HI and SMI benefit payments grew at about half of their pre-TEFRA rates during the first year of PPS. As a result, total Medicare benefit payments per beneficiary grew by only 3.4 percent in real terms during fiscal year 1984.

Conclusions

The data presented in this article are used to describe several aspects of the performance of the health care sector during the first year of the Medicare prospective payment system for hospitals.

Table 11
Total Medicare benefit payments, beneficiaries, and payments per beneficiary:
Fiscal years 1967-84

Fiscal year	Total benefit payments in millions		Medicare beneficiaries in thousands	Payments per beneficiary	
	Actual	Real ¹		Actual	Real ¹
1967	\$3,172	\$3,172	19,521	\$162	\$162
1968	5,126	4,919	19,821	259	248
1969	6,299	5,737	20,103	313	285
1970	6,783	5,832	20,491	331	285
1971	7,477	6,164	20,915	357	295
1972	8,363	6,674	21,332	392	313
1973	9,039	6,791	23,545	384	288
1974	10,680	7,231	24,201	441	299
1975	14,118	8,758	24,959	566	351
1976	16,939	9,935	25,663	660	387
1977	20,773	11,445	26,458	785	433
1978	24,263	12,417	27,164	893	457
1979	28,150	12,948	27,859	1,010	465
1980	33,934	13,750	28,478	1,192	483
1981	41,252	15,144	29,010	1,422	522
1982	49,149	17,001	29,494	1,666	576
1983	55,589	18,629	30,026	1,851	620
1984	60,949	19,598	30,593	1,992	641

¹ 1967 dollars.

SOURCES: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System; Office of the Actuary: Data from the Division of Medicare Cost Estimates.

Table 12
Average annual rates of increase in Medicare benefit payments, by type of payment:
Fiscal years 1973-84

Type of payment	1973-82		1982-83		1983-84	
	Actual	Real ¹	Actual	Real ¹	Actual	Real ¹
	Percent					
Total	+20.7	+10.7	+13.1	+9.6	+9.6	+5.2
Hospital insurance	+20.0	+10.1	+10.9	+7.5	+8.9	+4.4
Supplementary medical insurance	+22.5	+12.3	+18.1	+14.4	+11.4	+6.8
Per beneficiary	+17.7	+8.0	+11.1	+7.6	+7.6	+3.4

¹Deflated by the Consumer Price Index for "all items."

SOURCES: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Statistical System; Office of the Actuary: Data from the Division of Medicare Cost Estimates.

Although PPS directly affects only hospital behavior, it seems likely that the impact of the new system will be felt by many other groups of payers, providers, and consumers of health care. Moreover, although the major thrust of prospective payment is economic in nature, PPS may have an effect on access to health care and its quality as well.

It is difficult to measure the impact of PPS during its first year or to determine what effects are attributable to the new system. The availability of data for this type of analysis is limited. In addition, the gradual implementation of PPS makes it likely that the full impact will not be felt until future years, when prospective payment has been in place for awhile and its provisions and incentives are fully effective. Also, the dynamic nature of the health care sector will complicate any attempts to trace observed changes to any specific policy initiative.

Nonetheless, however valid the reservations about using early data to draw conclusions about the impact of PPS, it is important to at least attempt some tentative observations about the changes occurring during the first year of prospective payment. Whether or not the observed changes can be conclusively attributed to PPS, these observations are necessary to indicate whether progress is being made toward accomplishing the objectives of the new system.

The findings reported here lead to several observations about developments in the health care sector during the first year of PPS. Perhaps the most important of these developments is that the role of the hospital appears to be changing. Most obviously, hospitals are being used less. Admission rates and lengths of stay are falling for every population group, and occupancy rates are the lowest in memory.

Hospitals are now finding themselves in the position of competing for patients with other acute care settings, such as physicians offices and nonhospital emergency and surgical centers. Increased emphasis is being placed on alternatives to hospitalization, with inpatient admission increasingly being viewed as part of a continuum of care, rather than as the primary site of treatment.

Another important development is that third-party payers are becoming more actively involved in alternative forms of payment for health care, and that

the distinction between payers and providers is becoming less distinct. Medicaid programs are experimenting with prospective payment and other systems, the Blue Cross and Blue Shield plans are sponsoring HMO and PPO arrangements, and the hospital chains (such as Humana and the Hospital Corporation of America) are also getting into the HMO business.

In general, economic control seems to be shifting from the providers to the purchasers of health care. Although this shifting of market power is useful, in that it has and will continue to encourage efforts to control health care costs, several cautions must be expressed. It must be remembered that, in the health care market, the purchaser is frequently not the consumer of the product. Thus, an increase in the purchaser's market power does not necessarily represent an increase in the consumer's welfare. For this reason, access and quality must be carefully monitored in the new health care environment. Also, care must be taken that certain nonmarket activities, such as teaching and research functions, are not neglected just because their value is not explicitly recognized in the market. The provision of health care to those who cannot pay for that care should also be monitored to counteract the pressure that market forces may create to neglect those individuals.

Within this context, some preliminary conclusions may be drawn about the impact of PPS in its first year. The new system appears to have been implemented smoothly and to have encouraged substantial changes in the behavior of hospitals and of other major groups within the health care sector. Many of these changes are consistent with the expectations of those who designed and enacted PPS, although some changes—particularly the drop in Medicare admissions—were not anticipated. Furthermore, the rate of growth of Medicare benefit payments appears to have decreased under PPS, led by the decline in inpatient hospital payments. It is too early yet to tell about PPS's impact on access to care and the quality of care. Still, evidence on the new system indicates that it is accomplishing many of its stated objectives, without any major problems thus far.

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