Health Care Financing Trends

Medicare physician and hospital utilization and expenditure trends

by Winston O. Edwards and Charles R. Fisher

During the period 1983-86, the period directly following implementation of the Medicare prospective payment system, inpatient hospital care declined. Concurrently, fee-for-service utilization rates for physicians and other noninstitutional suppliers of medical goods and services and for outpatient facility care rose. Medicare expenditures for physicians and other suppliers and for outpatient facility care paralleled changes in utilization. In 1987, the proportion of Medicare patients receiving inpatient hospital care stabilized, but the proportion receiving outpatient hospital care continued to increase.

Introduction

Beginning in 1984, Medicare utilization and expenditure patterns for the services of physicians and other noninstitutional suppliers changed significantly. Medical services provided by physicians in inpatient hospitals declined sharply, and Medicare patients started receiving more care in outpatient hospital facilities and ambulatory surgical centers. Surgical care for less life-threatening illnesses, such as eye conditions, migrated from inpatient hospital settings to outpatient facilities and physicians' offices.

Although Part B, or supplementary medical insurance (SMI), benefit reimbursements for prepaid health care have risen rapidly in recent years, the fee-for-service sector still accounts for most Medicare expenditures. In this article, major trends in fee-for-service SMI allowed charges, benefit reimbursements, and utilization patterns through 1987 are examined.

Overview

Major regulatory and legislative changes in Medicare reimbursements for fee-for-service hospital and physician care were implemented in the period 1983-87. Utilization rates for inpatient hospital care, which had expanded almost continuously since the beginning of the Medicare program, abruptly declined after 1983, as utilization and expenditure rates for physicians and other suppliers of medical goods and services and outpatient facility care increased.

The prospective payment system (PPS), which began on October 1, 1983, was gradually phased in during fiscal year 1984. PPS radically changed the method of Medicare payment for inpatient hospital services from cost-based reimbursement, which had been in effect since the beginning of Medicare in 1966, to predetermined rates for diagnosis-related groups. A major PPS objective is to encourage non-inpatient surgical care. In 1983, 23 percent of all SMI enrollees used at least one hospital day in the year. By 1986, the proportion had declined to 19 percent, a rate that remained stable through 1987 (Table 1). In 1983, 44 percent of all users of SMI-reimbursed services had reimbursements both for physicians and other suppliers and for outpatient facility care. By 1987, the proportion had increased to more than 50 percent (Table 2). SMI enrollees using both physician and outpatient facility care increased from 28 percent in 1983 to 38 percent in 1987 (Table 1 and Figure 1). The joint use of outpatient facilities and of physicians and other suppliers increased both for patients who used inpatient facilities and for those who did not (Table 2). Medicare spending for physicians and other suppliers and for outpatient facility services paralleled changes in utilization. In 1983, persons using the services both of outpatient facilities and of physicians and other suppliers accounted for 68 percent of all SMI reimbursements, a proportion that increased to 80 percent in 1987. SMI spending for hospitalized and nonhospitalized persons followed similar trends. Persons using both physician services and outpatient facilities accounted for 69 percent of SMI spending for hospitalized enrollees in 1983 and 82 percent in 1987; persons in the same category accounted for 68 percent of SMI spending for nonhospitalized enrollees in 1983 and 76 percent in 1987 (Table 3).

(Spending for hospitalized persons shown in Table 3 includes both inpatient and out-of-hospital expenditures.) Part A, or hospital insurance (HI), payments for inpatient hospital care are increasingly accompanied by SMI reimbursements for the joint use of physician or other supplier and outpatient facility services (Table 4). In 1983, 62 percent of inpatient hospital spending was for persons using inpatient, physician or other supplier, and outpatient hospital services; this proportion increased to 75 percent in 1987. A relatively small amount of HI spending for SMI enrollees, $260 million in 1987, was not accompanied by any physician expenditure. This may have occurred because all physician spending for a hospital stay that straddled 2 calendar years occurred in the earlier year or because the physician did not perform a reimbursable service during the year. Average combined HI and SMI reimbursements for hospital users with inpatient hospital and physician or other supplier or outpatient facility care reached

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in 1987 (Table 5), 44 percent above 1983 levels. From 1983 to 1987, average SMI reimbursements for hospitalized persons increased 45 percent. The average SMI reimbursement is now about the same as the average HI reimbursement.

SMI reimbursements to physicians for inpatient hospital services, as a proportion of total SMI spending for hospitalized persons, decreased steadily during the period. The declining incidence of hospitalization further reduced the share of total SMI spending represented by reimbursements for physician services in inpatient hospitals. The marked decrease in the proportion of persons using inpatient care was accompanied by significant changes in the characteristics of inpatient hospitalizations that further altered utilization patterns of physician and other supplier services.

Conclusion

The period 1983-87 was characterized by decreased inpatient hospital utilization and by rapid growth in supplementary medical insurance reimbursements, particularly reimbursements for physicians and other suppliers of services in a non-inpatient hospital setting and for outpatient facility care.

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Technical note

Administrative data from the Health Care Financing Administration's Medicare Statistical System and Hospital Cost Report Information System were used in preparing this article. Data for all files and for all years are incomplete for a variety of reasons. Two salient reasons follow:

- Administrative data files are edited for erroneous records. Such editing may require reprocessing and reentry into the statistical files used for this article. Occasionally, reprocessed administrative records are not included in statistical files.
- In this article, an attempt was made to portray trends based on the year in which a service was rendered and an expense incurred. Frequently, long lags exist between the time of the service, the time a bill is submitted for the service, and the time the bill is finally recorded in the administrative billing system. Thus, statistical information derived from the administrative billing system is likely to be incomplete at any given time.

To adjust for these limitations, we estimated total utilization, charges, benefit expenditures, and person-use information to ensure internal consistency based on the best data sources available.
### Table 1
Percent distribution of Medicare supplementary medical insurance (SMI) enrollees, by type of SMI benefit received and hospitalization status: United States, calendar years 1983-87

| Calendar year and hospitalization status | All SMI enrollees | Without reimbursement | Total | Physician only | Physician and outpatient | Outpatient only | With reimbursement | Percent distribution |
|-----------------------------------------|-------------------|-----------------------|-------|----------------|--------------------------|----------------|-------------------|---------------------|
| **1983**                                |                   |                       |       |                |                          |                |                   |                     |
| Total                                   | 100.0             | 36.2                  | 63.8  | 34.0           | 28.9                     | 1.8            |                   |                     |
| Hospitalized                            |                   |                       | 22.8  | 10.4           | 12.3                     | 0.2            |                   |                     |
| Not hospitalized                        |                   |                       | 41.0  | 23.7           | 15.7                     | 1.6            |                   |                     |
| **1984**                                |                   |                       |       |                |                          |                |                   |                     |
| Total                                   | 100.0             | 33.4                  | 66.6  | 34.9           | 29.5                     | 2.2            |                   |                     |
| Hospitalized                            |                   |                       | 21.8  | 9.2            | 12.4                     | 0.2            |                   |                     |
| Not hospitalized                        |                   |                       | 44.7  | 25.7           | 17.1                     | 2.0            |                   |                     |
| **1985**                                |                   |                       |       |                |                          |                |                   |                     |
| Total                                   | 100.0             | 30.1                  | 69.9  | 34.6           | 33.2                     | 2.2            |                   |                     |
| Hospitalized                            |                   |                       | 19.6  | 8.8            | 12.8                     | 0.2            |                   |                     |
| Not hospitalized                        |                   |                       | 50.3  | 27.8           | 20.5                     | 2.0            |                   |                     |
| **1986**                                |                   |                       |       |                |                          |                |                   |                     |
| Total                                   | 100.0             | 28.9                  | 71.1  | 33.1           | 35.7                     | 2.2            |                   |                     |
| Hospitalized                            |                   |                       | 19.2  | 6.3            | 12.8                     | 0.2            |                   |                     |
| Not hospitalized                        |                   |                       | 51.8  | 26.8           | 22.9                     | 2.0            |                   |                     |
| **1987**                                |                   |                       |       |                |                          |                |                   |                     |
| Total                                   | 100.0             | 26.6                  | 73.4  | 33.1           | 38.4                     | 1.9            |                   |                     |
| Hospitalized                            |                   |                       | 19.1  | 5.8            | 13.3                     | 0.1            |                   |                     |
| Not hospitalized                        |                   |                       | 54.3  | 37.5           | 25.1                     | 1.8            |                   |                     |

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included. Totals do not necessarily equal the sum of rounded components. The numbers of persons ever enrolled for SMI (in thousands) are: 1983, 30,508; 1984, 30,981; 1985, 31,605; 1986, 32,240; and 1987, 32,843.

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

### Table 2
Number and percent distribution of Medicare supplementary medical insurance enrollees receiving benefits for physician services and outpatient facility care, by hospitalization status: United States, calendar years 1983-87

| Calendar year and hospitalization status | Total Number in thousands | Physician only | Physician and outpatient | Outpatient only | Type of benefit received |
|-----------------------------------------|---------------------------|----------------|--------------------------|-----------------|--------------------------|
| **1983**                                |                           |                |                          |                 |                          |
| Total                                   | 19,471                    | 10,383         | 8,540                    | 548             | 53.3                     | 43.9           | 2.8             |
| Hospitalized                            | 6,967                     | 3,165          | 3,749                    | 52              | 45.4                     | 53.8           | 0.7             |
| Not hospitalized                        | 12,504                    | 7,218          | 4,791                    | 496             | 57.7                     | 38.3           | 3.9             |
| **1984**                                |                           |                |                          |                 |                          |
| Total                                   | 20,632                    | 10,822         | 9,138                    | 672             | 52.5                     | 44.3           | 3.2             |
| Hospitalized                            | 8,769                     | 2,864          | 5,841                    | 64              | 42.3                     | 56.7           | 0.9             |
| Not hospitalized                        | 13,863                    | 7,958          | 5,905                    | 608             | 57.4                     | 38.2           | 4.4             |
| **1985**                                |                           |                |                          |                 |                          |
| Total                                   | 22,102                    | 10,929         | 10,481                   | 692             | 52.6                     | 47.4           | 3.1             |
| Hospitalized                            | 6,200                     | 2,157          | 3,995                    | 48              | 34.8                     | 64.4           | 0.8             |
| Not hospitalized                        | 15,901                    | 8,772          | 6,486                    | 644             | 55.2                     | 40.8           | 4.1             |
| **1986**                                |                           |                |                          |                 |                          |
| Total                                   | 22,907                    | 10,685         | 11,520                   | 703             | 46.6                     | 50.3           | 3.1             |
| Hospitalized                            | 6,205                     | 2,033          | 4,121                    | 52              | 32.8                     | 66.4           | 0.8             |
| Not hospitalized                        | 16,702                    | 8,652          | 7,349                    | 651             | 51.8                     | 44.3           | 3.9             |
| **1987**                                |                           |                |                          |                 |                          |
| Total                                   | 24,105                    | 10,878         | 12,627                   | 624             | 45.1                     | 52.3           | 2.6             |
| Hospitalized                            | 5,264                     | 1,853          | 3,410                    | 49              | 26.6                     | 68.6           | 0.8             |
| Not hospitalized                        | 17,841                    | 9,025          | 8,241                    | 575             | 50.6                     | 46.2           | 3.2             |

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included. Totals do not necessarily equal the sum of rounded components.

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

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Figure 1
Percent of Medicare supplementary medical insurance enrollees, by type of benefit received:
United States, 1983 and 1987

| Benefit Type               | 1983 | 1987 |
|----------------------------|------|------|
| No reimbursement           | 36.2 | 26.6 |
| Physician and outpatient   | 28.0 | 38.4 |
| Physician only             | 34.0 | 33.1 |
| Outpatient only            | 1.8  | 1.9  |

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included.

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

Table 3
Amount and percent distribution of Medicare supplementary medical insurance benefit payments for physician services and outpatient facility care, by type of benefit and hospitalization status:
United States, calendar years 1983-87

| Calendar year and hospitalization status | Benefit payment | Type of benefit received |
|-----------------------------------------|-----------------|--------------------------|
|                                         | All SMI         | All physician            | All outpatient           |
|                                         | Physician only  | Physician and outpatient | Outpatient only          |
|                                         | Amount in millions | Total                  | Physician               | Outpatient               |
| 1983 Total                             | $17,920         | $14,478                  | $3,442                   |
| Hospitalized                          | $5,557          | $12,258                  | $8,920                   |
| Not hospitalized                      | $4,020          | $8,447                   | $7,008                   |
| 1984 Total                             | $20,047         | $15,967                  | $4,080                   |
| Hospitalized                          | $5,711          | $14,211                  | $10,256                  |
| Not hospitalized                      | $3,844          | $9,815                   | $7,702                   |
| 1985 Total                             | $22,460         | $17,753                  | $4,708                   |
| Hospitalized                          | $5,340          | $16,940                  | $12,364                  |
| Not hospitalized                      | $3,013          | $10,790                  | $8,470                   |
| 1986 Total                             | $24,024         | $19,499                  | $4,525                   |
| Hospitalized                          | $5,340          | $18,421                  | $14,159                  |
| Not hospitalized                      | $3,013          | $10,790                  | $8,470                   |
| 1987 Total                             | $29,599         | $22,242                  | $7,357                   |
| Hospitalized                          | $5,689          | $22,773                  | $16,555                  |
| Not hospitalized                      | $11,709         | $8,367                   | $3,342                   |

See footnotes at end of table.
Table 3—Continued

Amount and percent distribution of Medicare supplementary medical insurance benefit payments for physician services and outpatient facility care, by type of benefit and hospitalization status:
United States, calendar years 1983-87

| Calendar year and hospitalization status | All SMI | All physician | All outpatient | Physician only | Physician and outpatient | Outpatient only |
|-----------------------------------------|---------|---------------|----------------|----------------|------------------------|----------------|
| **1983**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 80.8          | 19.2           | 31.0           | 58.4                   | 49.8           |
| Hospitalized                            | 100.0   | 65.6          | 14.4           | 31.2           | 62.7                   | 54.4           |
| Not hospitalized                        | 100.0   | 66.5          | 31.5           | 30.5           | 67.6                   | 38.0           |
| **1984**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.6          | 20.4           | 28.5           | 70.9                   | 51.2           |
| Hospitalized                            | 100.0   | 64.4          | 15.6           | 28.1           | 71.7                   | 56.3           |
| Not hospitalized                        | 100.0   | 69.5          | 30.5           | 29.3           | 69.1                   | 40.1           |
| **1985**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.0          | 21.0           | 24.0           | 75.4                   | 55.0           |
| Hospitalized                            | 100.0   | 83.0          | 17.0           | 21.8           | 78.0                   | 61.3           |
| Not hospitalized                        | 100.0   | 72.6          | 27.4           | 27.5           | 71.2                   | 45.1           |
| **1986**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 78.3          | 21.7           | 21.4           | 79.0                   | 58.8           |
| Hospitalized                            | 100.0   | 82.8          | 17.2           | 18.6           | 80.2                   | 63.2           |
| Not hospitalized                        | 100.0   | 71.6          | 28.4           | 24.2           | 74.6                   | 47.4           |
| **1987**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 77.8          | 22.2           | 19.9           | 79.6                   | 57.9           |
| Hospitalized                            | 100.0   | 82.1          | 17.9           | 17.5           | 82.4                   | 64.7           |
| Not hospitalized                        | 100.0   | 71.5          | 28.5           | 23.4           | 75.6                   | 48.1           |

Percent distribution by type of benefit

| Calendar year and hospitalization status | All SMI | All physician | All outpatient | Physician only | Physician and outpatient | Outpatient only |
|-----------------------------------------|---------|---------------|----------------|----------------|------------------------|----------------|
| **1983**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 80.8          | 19.2           | 31.0           | 58.4                   | 49.8           |
| Hospitalized                            | 100.0   | 65.6          | 14.4           | 31.2           | 62.7                   | 54.4           |
| Not hospitalized                        | 100.0   | 66.5          | 31.5           | 30.5           | 67.6                   | 38.0           |
| **1984**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.6          | 20.4           | 28.5           | 70.9                   | 51.2           |
| Hospitalized                            | 100.0   | 64.4          | 15.6           | 28.1           | 71.7                   | 56.3           |
| Not hospitalized                        | 100.0   | 69.5          | 30.5           | 29.3           | 69.1                   | 40.1           |
| **1985**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.0          | 21.0           | 24.0           | 75.4                   | 55.0           |
| Hospitalized                            | 100.0   | 83.0          | 17.0           | 21.8           | 78.0                   | 61.3           |
| Not hospitalized                        | 100.0   | 72.6          | 27.4           | 27.5           | 71.2                   | 45.1           |
| **1986**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 78.3          | 21.7           | 21.4           | 79.0                   | 58.8           |
| Hospitalized                            | 100.0   | 82.8          | 17.2           | 18.6           | 80.2                   | 63.2           |
| Not hospitalized                        | 100.0   | 71.6          | 28.4           | 24.2           | 74.6                   | 47.4           |
| **1987**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 77.8          | 22.2           | 19.9           | 79.6                   | 57.9           |
| Hospitalized                            | 100.0   | 82.1          | 17.9           | 17.5           | 82.4                   | 64.7           |
| Not hospitalized                        | 100.0   | 71.5          | 28.5           | 23.4           | 75.6                   | 48.1           |

Percent distribution by hospitalization status

| Calendar year and hospitalization status | All SMI | All physician | All outpatient | Physician only | Physician and outpatient | Outpatient only |
|-----------------------------------------|---------|---------------|----------------|----------------|------------------------|----------------|
| **1983**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 80.8          | 19.2           | 31.0           | 58.4                   | 49.8           |
| Hospitalized                            | 100.0   | 65.6          | 14.4           | 31.2           | 62.7                   | 54.4           |
| Not hospitalized                        | 100.0   | 66.5          | 31.5           | 30.5           | 67.6                   | 38.0           |
| **1984**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.6          | 20.4           | 28.5           | 70.9                   | 51.2           |
| Hospitalized                            | 100.0   | 64.4          | 15.6           | 28.1           | 71.7                   | 56.3           |
| Not hospitalized                        | 100.0   | 69.5          | 30.5           | 29.3           | 69.1                   | 40.1           |
| **1985**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 79.0          | 21.0           | 24.0           | 75.4                   | 55.0           |
| Hospitalized                            | 100.0   | 83.0          | 17.0           | 21.8           | 78.0                   | 61.3           |
| Not hospitalized                        | 100.0   | 72.6          | 27.4           | 27.5           | 71.2                   | 45.1           |
| **1986**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 78.3          | 21.7           | 21.4           | 79.0                   | 58.8           |
| Hospitalized                            | 100.0   | 82.8          | 17.2           | 18.6           | 80.2                   | 63.2           |
| Not hospitalized                        | 100.0   | 71.6          | 28.4           | 24.2           | 74.6                   | 47.4           |
| **1987**                                |         |               |                |                |                        |                |
| Total                                   | 100.0   | 77.8          | 22.2           | 19.9           | 79.6                   | 57.9           |
| Hospitalized                            | 100.0   | 82.1          | 17.9           | 17.5           | 82.4                   | 64.7           |
| Not hospitalized                        | 100.0   | 71.5          | 28.5           | 23.4           | 75.6                   | 48.1           |

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included. Totals do not necessarily equal the sum of rounded components.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy; Data from the Medicare Statistical System.
### Table 4
Amount and percent distribution of Medicare hospital insurance benefit payments for inpatient hospital care, by type of supplementary medical insurance benefits received: United States, calendar years 1983-87

| Calendar year | Total | Physician only | Physician and outpatient | Outpatient only |
|---------------|-------|----------------|--------------------------|-----------------|
| 1983          | $33,818 | $12,479         | $21,111                  | $228            |
| 1984          | 37,878  | 13,084          | 24,484                   | 310             |
| 1985          | 39,223  | 11,296          | 27,684                   | 263             |
| 1986          | 41,431  | 11,055          | 30,976                   | 281             |
| 1987          | 43,767  | 10,640          | 32,127                   | 260             |

| Calendar year | Total | Physician only | Physician and outpatient | Outpatient only |
|---------------|-------|----------------|--------------------------|-----------------|
| 1983          | 100.0  | 36.9           | 62.4                     | 0.7             |
| 1984          | 100.0  | 34.5           | 65.5                     | 0.8             |
| 1985          | 100.0  | 31.3           | 68.7                     | 0.7             |
| 1986          | 100.0  | 26.7           | 72.6                     | 0.7             |
| 1987          | 100.0  | 24.3           | 75.1                     | 0.6             |

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included. Totals do not necessarily equal the sum of rounded components.

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

### Table 5
Total Medicare spending per person hospitalized, by type of supplementary medical insurance benefit and type of expense: United States, calendar years 1983-87

| Calendar year and type of expense | Total | Physician only | Physician and outpatient | Outpatient only |
|----------------------------------|-------|----------------|--------------------------|-----------------|
| 1983                             | $6,718 | $5,213         | $1,529                   | $374            |
| Physician or outpatient          | 1,857  | 1,571          | 286                      | 10             |
| Inpatient hospital               | 4,858  | 3,642          | 1,216                    | 30             |
| 1984                             | 7,640  | 6,120          | 1,529                    | 67             |
| Physician or outpatient          | 2,087  | 1,784          | 303                      | 23             |
| Inpatient hospital               | 5,553  | 4,336          | 1,217                    | 96             |
| 1985                             | 8,575  | 6,634          | 1,941                    | 60             |
| Physician or outpatient          | 2,243  | 1,858          | 385                      | 24             |
| Inpatient hospital               | 6,332  | 4,776          | 1,557                    | 66             |
| 1986                             | 9,109  | 6,879          | 2,230                    | 100            |
| Physician or outpatient          | 2,421  | 1,440          | 981                      | 101            |
| Inpatient hospital               | 6,688  | 5,439          | 1,249                    | 79             |
| 1987                             | 9,685  | 7,335          | 2,350                    | 102            |
| Physician or outpatient          | 2,697  | 1,592          | 1,105                    | 13             |
| Inpatient hospital               | 6,988  | 5,743          | 754                      | 444            |

1Excludes hospitalized patients with outpatient hospital payments only.

NOTES: "Physicians" includes both physicians and other noninstitutional suppliers of medical goods and services. Only fee-for-service use is included. Totals do not necessarily equal the sum of rounded components.

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