

Health Care Financing Note

Use and cost of short-stay hospital inpatient services under Medicare, 1988

by Viola B. Latta and Roger E. Keene

In this article, data are presented on trends in the use of and program payments for inpatient short-stay hospital services to Medicare beneficiaries. The data on the services used by aged and disabled Medicare beneficiaries are presented for the years 1972 through 1988. The discussion is focused on trends in utilization and program payments resulting from the implementation of the Medicare prospective payment system. The State data for 1988 consist of utilization and program payment statistics by the residence of the beneficiaries in urban and rural areas. This is the first time that inpatient hospital data have been presented in this manner.

Introduction

The Medicare prospective payment system (PPS) was established by the Social Security Amendments of 1983 (Public Law 98-21). It became effective for hospital fiscal years beginning on or after October 1, 1983. PPS applied to all hospitals except for specified types of hospitals or units of hospitals excluded by law (Definition of terms). Designed to provide incentives to hospitals to control costs without adversely affecting the quality of care, PPS represented a restructuring of the system of paying hospitals for inpatient services furnished to Medicare beneficiaries. PPS replaced the original cost-based retrospective payment system by making payments at predetermined rates based on the patient's diagnosis-related group (DRG). If the hospital could provide services at a cost less than the predetermined rate, it retained the difference.

The DRG to which a Medicare patient is assigned determines the amount paid by the program for the patient's care. The DRG assignment is based on such factors as the principal diagnosis, surgical procedures performed, the patient's age and sex, and the presence or absence of additional conditions (Definition of terms).

Tables 1 and 2 are designed to provide some measure of the impact of PPS on short-stay hospital utilization and program payments under Medicare. In Table 1, it can be seen that notable changes in utilization patterns coincide with the implementation of PPS. Between 1983 and 1984, the first full year of PPS, the discharge rate for Medicare beneficiaries dropped from 387 to 363 per 1,000 enrollees. In the second year, the drop in the discharge rate was even greater, to 328 per 1,000 enrollees, and it has continued to decrease through 1988. This basic pattern was observed among both aged and

disabled beneficiaries and, for the period from 1983 through 1988, both groups showed virtually the same rate of decrease.

This decrease in the discharge rate (that was also noted in the non-Medicare population) was not anticipated in the predictions of the possible impacts of PPS. It is still not completely clear why this decrease in the discharge rate took place. However, during this period, many procedures that previously had required an inpatient admission became increasingly performed on an outpatient basis. One specific example of such procedures is cataract removal. Another factor that may have been operating to reduce the discharge rate is the application of more rigorous criteria to reduce marginal medical admissions. The Codman Report (1990) to the Prospective Payment Assessment Commission (ProPAC) indicated that the largest decreases occurred among high-volume medical conditions for which there was a relatively weak consensus on the need for hospitalization. The timing of this change suggests that it may, in part, represent the impact of peer review organization monitoring of hospital admissions. In contrast to the unanticipated drop in the discharge rate, a decrease in lengths of stay was anticipated and has occurred.

Selected data highlights

In Table 1, it can be seen that lengths of stay had been decreasing prior to the initiation of PPS. However, between 1983 and 1984, the average length of stay (ALOS) had its largest 1-year drop in any year before or since. Unlike the discharge rate, however, the ALOS has not continued to decline. It quickly stabilized and even increased slightly after 1985.

The combined effect of the changes in the discharge rate and the ALOS is reflected in the total days of care (TDOC) rate. Again, a notable decrease between 1983 (3,786 days per 1,000 enrollees) and 1984 (3,217 days per 1,000) is noted, with a further decrease in 1985 (2,822 days per 1,000). The overall rate has remained relatively stable since then (Figure 1). This stability in the TDOC rate is more evident among aged beneficiaries, where it has hovered around 2,760 per 1,000 enrollees, than among the disabled. After a slight increase in 1986, the TDOC rate among the disabled resumed dropping—to 3,203 per 1,000 in 1988.

From 1972 through 1983, Medicare program payments for inpatient short-stay hospital services rose at an average annual rate of 18.0 percent. After the implementation of PPS, the rate of increase slowed to 6.4 percent during the period from 1983 through 1988. Prior to 1984, the basis for paying for services was cost per day, and during the period from 1972 through 1983, per diem costs rose at an average annual rate of 14.1 percent. With PPS, the basis for payment became, for most hospitals, the hospital stay as a whole—or per discharge. Between 1983 and 1988, the payment rate per discharge increased at an annual rate of 8.8 percent. Total

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Figure 1
Annual total days of care rate per 1,000 enrollees for Medicare beneficiaries discharged from short-stay hospitals: Calendar years 1972-88

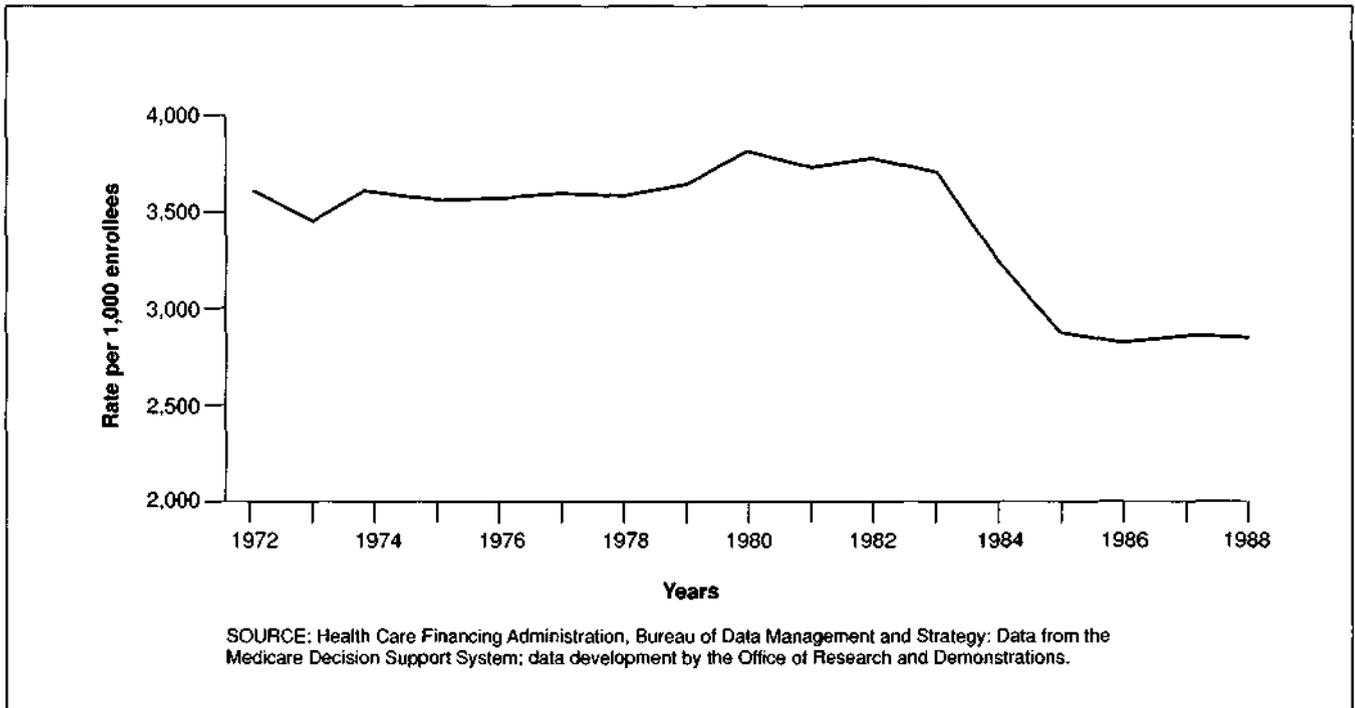


Table 2

Medicare short-stay hospital inpatient average length of stay, and short-stay hospital program payments as a percent of all Medicare program payments: Calendar years 1983-88

Calendar year	Average length of stay		Program payments	
	All short-stay hospital discharges	Prospective payment system hospital discharges	Total Medicare in millions ¹	Short-stay hospital as a percent of total
1983	9.8	(²)	\$57,443	64.3
1984	8.9	7.8	62,918	64.2
1985	8.6	7.8	70,527	61.8
1986	8.7	8.2	75,997	59.6
1987	8.7	8.3	80,316	58.0
1988	8.8	8.4	86,487	57.3

¹Program payments exclude administrative costs; Data from the Office of the Actuary.

²The prospective payment system became effective October 1, 1983.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System, 1988.

program payments increased at a slower rate than payments per discharge during this period because the number of discharges was decreasing.

As shown in Table 2, the ALOS in PPS hospitals and all short-stay hospitals has increased slightly since the low point in 1985. One reason may be the aging of the Medicare enrollees—with an accompanying increase in the medical complexity of the average patient admitted to the hospital. Another factor may be the diversion of more cases to treatment in ambulatory facilities (i.e., ambulatory surgical centers, hospital outpatient

departments), leaving the more seriously ill to be admitted for inpatient care. Also, the previously mentioned monitoring by PROs may have reduced the frequency of marginal medical admissions that require short lengths of stay.

Whatever contribution these factors may make to the noted increase in ALOS, ProPAC (1989) noted in its recent report that the Medicare DRG case-mix index has been increasing at a rate of 3 percent per year since the implementation of PPS. However, the rising index has been partly attributed to the increased accuracy and completeness of medical record reporting and coding, because payment is based on the reported conditions and procedures. The report also noted the shift of medical and surgical services from the inpatient setting toward office and other outpatient settings.

The apparent stability in the rate of decline in ALOS before and after PPS merits comment. Even though the pre-PPS decline occurred steadily over many years, the post-PPS decline seems concentrated in the first 2 years, followed by stabilization and an apparent tendency to rise. It is unclear whether there is an underlying dynamic that points to a resumption of the long-term decline or whether an asymptotic stability suggested by the changing nature of hospital admissions is more likely.

The other notable trend in Table 2 is the steady decrease in the share of the Medicare dollar going for inpatient short-stay hospital services; from 64.3 percent in 1983 to 57.3 percent in 1988. This reflects, in part, the notable slowing in the rate of increase in program payments for inpatient services. From 1972 through 1983, inpatient payments increased at an average annual rate of 18.0 percent per year. Following the implementation of PPS, the average rate of increase slowed to 6.4 percent

per year, a rate lower than the rate of increase in Medicare payments for other services covered by the program. Among the factors that may be causing a greater rate of increase in other program sectors may be the increased complexity of cases now being treated on an ambulatory basis because of the changes taking place in the admission and discharge practices of short-stay hospitals.

Medicare 1988 short-stay hospital data by census region, division, and State according to the urban or rural residence of the beneficiary are presented in Table 3. The statistics include the number of discharges, the annual discharge rate per 1,000 enrollees, the ALOS per discharge, the annual total days of care rate per 1,000 enrollees, and the average program payment per discharge and per enrollee.

Since the implementation of PPS, the Medicare program has reimbursed urban and rural hospitals at separate rates based upon historical differences in costs. At the start of PPS, hospitals' costs were computed on a standardized per-case basis. Standardization covered both the medical characteristics of the patients (e.g., case mix as measured by DRGs) and hospital characteristics (e.g., wage differentials, the share of low-income patients served, and the indirect costs of medical education). After standardization, costs per case in rural hospitals were 21 percent lower than for urban hospitals. This reflected geographical factors not eliminated in the standardizations. Congress reduced this differential in fiscal year 1988 by granting to rural hospitals a greater adjustment to cost factors on which the payment amounts are based than it did for urban hospitals. Although the difference between urban and rural payment rates is reflected in Table 3 data on program payments, the reader should also bear in mind that the data are based on the residence of the beneficiary—not the location of the hospital. Unpublished data show that since the implementation of PPS, discharges from urban hospitals account for about 26 to 29 percent of all discharges of Medicare beneficiaries residing in rural areas. Thus, Table 3 is a measure of the distribution of the Medicare inpatient hospital benefit by residence of the beneficiary rather than a measure of differences in the use of and payments to hospitals in urban and rural areas. Also shown is the large difference between urban and rural areas in the distribution of the Medicare hospital benefit in dollar terms. However, rural residents do not appear disadvantaged in terms of access as measured by the discharge rate.

- Of the total Medicare short-stay hospital discharges (10.2 million) in the United States during 1988, about 29 percent (2.9 million) were of beneficiaries living in rural areas.
- An estimated 57 percent (1.7 million) of the hospital discharges of rural beneficiaries were concentrated in 15 States.
- In six of these States—Idaho, Mississippi, Montana, North Dakota, South Dakota, and Vermont—rural residents accounted for over 75 percent of the hospital discharges.
- The hospital discharge rate was higher for rural beneficiaries (346 per 1,000 enrollees) than for urban enrollees (311 per 1,000 enrollees).

- In every census region, the discharge rate was higher for rural residents than for urban residents.
- The difference between the urban and rural discharge rates was largest in the South: 375 per 1,000 rural enrollees to 325 per 1,000 urban enrollees.
- In five States, the hospital discharge rate of rural Medicare beneficiaries exceeded 400 per 1,000 enrollees: North Dakota, Kentucky, Mississippi, Tennessee, and Louisiana. Among urban beneficiaries, this rate was exceeded only in Mississippi.

There were considerable differences in the ALOS and the average program payment between Medicare beneficiaries residing in urban areas and those living in rural areas.

- Nationally, the difference in ALOS between urban (9.4 days) and rural (7.7 days) beneficiaries was 1.7 days.
- Among the regions, the difference in ALOS between urban and rural beneficiaries ranged from 1.1 days in the West to 1.9 days in the Northeast.
- Variation in the ALOS is substantial between urban and rural beneficiaries within the State. The difference in ALOS in the States of Idaho and Minnesota was only about one-half day. Conversely, the difference in the States of Alaska and Vermont were 2.4 days and 2.8 days, respectively.
- Beneficiaries residing in rural areas accounted for 22 percent (\$10.5 billion) of all Medicare short-stay hospital inpatient program payments (\$46.9 billion), compared with 29 percent of all short-stay hospital discharges (not shown in table).
- The average program payment per discharge for beneficiaries residing in urban areas was \$5,016, or approximately 41 percent greater than that for rural beneficiaries (\$3,563).
- By region, the difference in average program payment per discharge between urban and rural beneficiaries ranged from a low of 29 percent in the West to a high of 46 percent in the Northeast.
- By State, the difference in the average payment per discharge varied substantially between urban and rural beneficiaries. In four States—New Hampshire, Wyoming, Washington, and Oregon—the difference was less than 10 percent. Conversely, the average program payment per discharge for urban beneficiaries (\$6,222) in New York was over 75 percent greater than the average for rural beneficiaries (\$3,539).

Program payment per enrollee represents the combined effects of the discharge rate (discharge per enrollee) and program payment per discharge. The relationship is shown in the following identity:

$$\frac{\text{Payment}}{\text{Enrollee}} = \frac{\text{Discharge}}{\text{Enrollee}} \times \frac{\text{Payment}}{\text{Discharge}}$$

Program payment per enrollee is the net distribution of the hospital benefit per enrollee in a specified area. In this respect, the higher discharge rate among rural Medicare enrollees does not offset the higher average program payment per hospital discharge for urban enrollees. Therefore, overall, the average program payment per urban enrollee (\$1,562) is 27 percent higher than for rural enrollees (\$1,231).

Table 3

**Medicare utilization and program payments, for beneficiaries discharged from short-stay hospitals in the United States, by area of residence:
Calendar year 1988**

Area of residence	Number of discharges in thousands			Discharge rate per 1,000 enrollees			Average total days of care			Days of care rate per 1,000 enrollees			Average amount of program payments per discharge			Average program payment per enrollee		
	Total	Urban ¹	Rural ¹	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
United States ²	10,165	7,223	2,942	321	311	346	8.9	9.4	7.7	2,845	2,914	2,659	\$4,596	\$5,016	\$3,563	\$1,473	\$1,562	\$1,231
Northeast	2,257	1,985	273	315	312	341	10.0	11.4	9.5	3,529	3,564	3,254	5,277	5,486	3,755	1,661	1,709	1,280
North Central	2,613	1,688	925	322	319	327	8.4	9.0	7.4	2,710	2,864	2,422	4,482	4,942	3,641	1,444	1,579	1,192
South	3,687	2,260	1,427	342	325	375	8.5	8.9	7.8	2,902	2,885	2,934	4,084	4,536	3,367	1,399	1,473	1,263
West	1,607	1,289	318	284	282	293	7.3	7.5	6.4	2,065	2,111	1,872	4,999	5,233	4,050	1,418	1,473	1,186
New England	540	465	75	296	295	304	5.5	10.8	9.0	3,133	3,197	2,725	4,918	5,068	3,985	1,456	1,495	1,210
Connecticut	119	115	4	263	262	287	10.6	10.6	9.4	2,789	2,792	2,698	5,458	5,496	4,358	1,435	1,441	1,251
Maine	54	29	25	309	294	328	9.5	10.3	8.7	2,948	3,020	2,856	3,984	4,421	3,484	1,230	1,299	1,142
Massachusetts	263	248	15	314	317	267	10.9	11.0	9.2	3,424	3,493	2,465	5,067	5,081	4,838	1,589	1,610	1,292
New Hampshire	37	24	13	284	277	296	9.0	9.3	8.6	2,564	2,573	2,548	4,213	4,329	4,008	1,195	1,199	1,187
Rhode Island	46	46	NA	300	300	NA	11.4	11.4	NA	3,425	3,423	NA	4,686	4,686	NA	1,406	1,406	NA
Vermont	20	3	17	284	299	282	9.7	12.1	9.3	2,780	3,624	2,626	4,142	5,525	3,874	1,178	1,653	1,091
Middle Atlantic	1,717	1,520	198	321	317	357	11.5	11.6	9.8	3,664	3,684	3,489	5,390	5,614	3,668	1,731	1,779	1,311
New Jersey	329	329	NA	314	314	NA	11.7	11.6	NA	3,642	3,639	NA	5,232	5,232	NA	1,641	1,640	NA
New York	740	652	89	306	301	354	13.0	13.2	11.2	3,974	3,977	3,953	5,900	6,222	3,539	1,807	1,871	1,254
Pennsylvania	648	539	109	344	342	360	9.5	9.7	8.6	3,277	3,312	3,098	4,887	5,113	3,770	1,683	1,746	1,356
East North Central	1,821	1,335	487	328	327	331	8.8	9.1	7.5	2,836	2,965	2,476	4,673	5,032	3,688	1,533	1,645	1,222
Illinois	499	376	123	337	332	353	8.8	9.3	7.6	2,992	3,091	2,669	4,744	5,163	3,462	1,599	1,715	1,223
Indiana	237	151	85	323	317	335	8.2	8.6	7.5	2,652	2,735	2,499	4,189	4,511	3,620	1,354	1,430	1,213
Michigan	370	282	88	314	314	311	8.9	9.4	7.4	2,790	2,941	2,312	5,150	5,481	4,092	1,615	1,723	1,274
Ohio	500	393	107	340	340	340	8.8	9.1	7.7	2,991	3,089	2,629	4,710	4,965	3,778	1,602	1,689	1,285
Wisconsin	216	133	83	313	315	310	7.7	8.3	7.1	2,442	2,598	2,194	4,135	4,501	3,549	1,295	1,417	1,102
West North Central	792	354	438	310	294	323	7.9	8.6	7.3	2,437	2,520	2,364	4,042	4,604	3,589	1,251	1,354	1,160
Iowa	135	49	87	303	308	301	8.0	8.9	7.6	2,449	2,728	2,296	3,853	4,188	3,665	1,169	1,290	1,103
Kansas	123	47	76	349	320	371	7.5	8.5	7.1	2,676	2,723	2,643	3,909	4,670	3,440	1,366	1,493	1,276
Minnesota	143	70	73	251	223	286	6.9	7.0	6.6	1,710	1,572	1,879	4,053	4,390	3,729	1,019	980	1,067
Missouri	249	149	100	330	332	326	8.8	9.2	8.1	2,885	3,058	2,632	4,387	4,832	3,723	1,447	1,606	1,214
Nebraska	67	23	44	287	276	293	7.8	9.0	7.2	2,236	2,473	2,103	3,864	4,738	3,404	1,109	1,308	998
North Dakota	36	8	27	373	310	408	7.3	8.1	6.9	2,666	2,501	2,801	3,745	4,482	3,518	1,396	1,389	1,434
South Dakota	39	7	31	362	305	378	7.0	7.8	6.8	2,533	2,389	2,574	3,454	4,082	3,307	1,249	1,246	1,249
South Atlantic	1,822	1,257	565	319	308	345	8.9	9.2	8.4	2,844	2,827	2,884	4,279	4,616	3,528	1,365	1,424	1,218
Delaware	27	16	11	319	299	353	9.4	9.9	8.5	2,972	2,965	2,982	4,396	4,992	3,559	1,404	1,493	1,255
District of Columbia	25	25	NA	337	337	NA	12.1	13.0	NA	4,386	4,386	NA	7,956	7,956	NA	2,680	2,680	NA
Florida	623	552	71	289	287	307	8.5	8.7	7.8	2,484	2,495	2,387	4,459	4,522	3,969	1,288	1,296	1,218
Georgia	257	138	119	375	356	399	8.0	8.6	7.4	3,017	3,054	2,970	3,660	4,120	3,127	1,373	1,469	1,249
Maryland	178	162	16	351	353	330	9.1	9.4	8.3	3,258	3,313	2,734	5,109	5,227	3,894	1,792	1,845	1,286
North Carolina	251	116	135	302	278	327	9.7	10.2	9.3	2,939	2,846	3,033	4,113	4,816	3,681	1,243	1,282	1,203
South Carolina	121	68	53	295	290	302	9.3	9.9	8.9	2,789	2,868	2,683	4,074	4,390	3,668	1,203	1,275	1,107
Virginia	234	142	92	347	337	365	9.0	9.4	8.6	3,157	3,170	3,134	4,014	4,395	3,426	1,395	1,481	1,250
West Virginia	108	40	68	366	368	365	8.2	8.8	8.0	3,037	3,259	2,909	3,661	4,099	3,404	1,340	1,510	1,242

See footnotes at end of table.

Table 3—Continued

Medicare utilization and program payments, for beneficiaries discharged from short-stay hospitals in the United States, by area of residence:
Calendar year 1988

Area of residence	Number of discharges in thousands			Discharge rate per 1,000 enrollees			Average total days of care			Days of care rate per 1,000 enrollees			Average amount of program payments per discharge			Average program payment per enrollee		
	Total	Urban ¹	Rural ¹	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
East South Central	813	376	437	395	365	426	8.1	8.8	7.6	3,209	3,199	3,218	\$3,543	\$4,127	\$3,040	\$1,400	\$1,506	\$1,294
Alabama	199	118	81	361	351	378	8.0	8.4	7.3	2,888	2,961	2,773	3,777	4,144	3,239	1,363	1,453	1,223
Kentucky	197	78	119	389	359	412	8.1	8.7	7.8	3,173	3,134	3,202	3,570	4,222	3,144	1,390	1,517	1,295
Mississippi	156	33	123	449	403	463	7.7	8.6	7.7	3,530	3,447	3,556	3,020	3,776	2,815	1,354	1,521	1,303
Tennessee	261	147	115	400	372	443	8.4	9.1	7.4	3,335	3,385	3,258	3,655	4,142	3,033	1,463	1,542	1,343
West South Central	1,052	628	425	351	338	372	8.0	8.4	7.4	2,804	2,837	2,751	4,164	4,620	3,490	1,462	1,561	1,299
Arkansas	137	42	95	366	354	372	7.9	8.8	7.8	2,964	3,126	2,888	3,387	3,846	3,182	1,241	1,361	1,185
Louisiana	196	122	74	394	377	426	7.6	8.1	7.1	3,028	3,037	3,011	4,193	4,655	3,431	1,652	1,755	1,461
Oklahoma	161	74	87	374	350	397	7.8	8.5	7.2	2,923	2,977	2,872	3,928	4,500	3,445	1,469	1,573	1,368
Texas	558	389	169	329	324	342	8.1	8.4	7.4	2,673	2,730	2,533	4,413	4,717	3,711	1,452	1,527	1,271
Mountain	434	260	175	289	278	307	7.0	7.5	6.4	2,045	2,091	1,970	4,426	4,857	3,787	1,279	1,350	1,162
Arizona	134	102	32	292	295	285	7.2	7.5	6.8	2,140	2,206	1,936	4,914	5,111	4,294	1,437	1,506	1,226
Colorado	87	65	22	263	259	275	7.4	7.9	6.2	1,956	2,040	1,693	4,618	4,920	3,731	1,215	1,277	1,024
Idaho	36	5	31	284	232	295	6.1	6.8	6.3	1,803	1,579	1,850	3,890	4,846	3,733	1,105	1,122	1,101
Montana	39	8	31	348	325	354	6.5	7.3	6.4	2,282	2,387	2,252	3,647	4,054	3,538	1,268	1,318	1,254
Nevada	32	28	4	269	286	196	7.9	8.0	6.8	2,117	2,298	1,325	4,997	5,083	4,453	1,344	1,451	874
New Mexico	50	20	30	307	272	337	6.6	7.0	6.6	2,082	1,906	2,228	3,677	3,929	3,508	1,129	1,067	1,180
Utah	39	27	12	265	252	301	6.4	6.8	5.8	1,704	1,711	1,886	4,363	4,602	3,818	1,158	1,161	1,150
Wyoming	18	5	13	370	369	371	6.5	8.0	6.6	2,582	2,937	2,447	3,822	4,077	3,726	1,415	1,503	1,381
Pacific	1,173	1,030	143	282	282	277	7.3	7.5	6.4	2,072	2,116	1,763	5,211	5,328	4,371	1,469	1,505	1,212
Alaska	6	2	4	267	260	271	7.7	9.8	7.4	2,212	2,559	2,010	6,347	7,573	5,662	1,697	1,970	1,537
California	887	830	57	291	291	297	7.5	7.6	6.5	2,185	2,202	1,941	5,474	5,525	4,725	1,593	1,608	1,403
Hawaii	23	16	7	203	194	226	9.7	10.6	8.5	2,013	2,050	1,917	4,635	5,097	3,598	941	990	813
Oregon	101	64	37	252	246	263	6.2	6.5	5.9	1,587	1,605	1,554	4,082	4,106	4,043	1,030	1,011	1,063
Washington	156	118	37	269	267	277	6.7	7.0	6.0	1,819	1,864	1,669	4,493	4,592	4,180	1,211	1,227	1,157

¹Based on the area of residence of the beneficiary.

²Includes unknown areas.

NOTE: NA is not applicable. Differences in program payments are not adjusted to account for differences in inpatient case mix.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Data from the Medicare Decision Support System; data development by the Office of Research and Demonstrations.

- The average program payment per rural enrollee is higher than the payment per urban enrollee in only five States: Minnesota, North and South Dakota, New Mexico, and Oregon.
- The average program payment per enrollee is less than \$100 greater for urban than for rural enrollees in seven States: New Hampshire, Florida, North Carolina, Idaho, Montana, Utah, and Washington.

Definition of terms

Annual rates per 1,000 enrollees—A ratio of the total number of discharges or days of care to the number of persons entitled to benefits as of July 1 of that year.

Covered day of care—A day of inpatient hospital care during which services furnished to a person eligible for hospital insurance (HI) benefits are deemed to be covered under the Medicare program.

Day of care—A day during which inpatient hospital services were furnished to a person eligible for HI benefits under Medicare. The day of discharge is not counted as a day of care.

Diagnosis-related groups (DRGs)—The patient classification system used by Medicare to place patients into 477 mutually exclusive and exhaustive patient groups based on information from the discharge record such as the principal diagnosis, surgical procedure, age, sex, discharge status, and the presence or absence of an additional diagnosis. The 477 Medicare DRGs represent patient categories that are reasonably similar in resource consumption as measured by length of stay. The specific DRG classification into which a patient is placed determines the amount paid by Medicare for the care of that patient. The DRG assignment is mainly dependent on the medical and surgical codes contained in the *International Classification of Diseases, 9th Revision, Clinical Modification* (Public Health Service and Health Care Financing Administration, 1980).

Discharge—The formal release of an inpatient from a hospital. Discharges include those persons who died during their hospitalization.

Hospital charges—The hospital's charges for room, board, and ancillary services as recorded on the billing form (HCFA 1450).

Hospitals and units excluded from the prospective payment system—PPS applies to all inpatient hospitals participating in the Medicare program except for those hospitals or units excluded by law. For 1988, these exclusions applied to: hospitals participating in approved State alternative reimbursement programs located in two waiver States—Maryland and New Jersey; hospitals located outside the 50 States and the District of Columbia; psychiatric, rehabilitation, children's, and long-term care hospitals; distinct-part psychiatric and rehabilitation units of acute care hospitals; and hospitals participating in approved demonstration projects or regional demonstrations.

Non-prospective payment system—Hospitals and units still being reimbursed for Part A short-stay hospital inpatient services based on the retrospective cost-based reimbursement established to reflect costs as closely as possible, usually as a per diem amount or as a percentage of total charges. These payments exclude beneficiary

cost-sharing amounts and retroactive audit adjustments based on the provider's audited reasonable costs of operation.

Prospective payment system—Established by the Social Security Amendments of 1983 (Public Law 98-21) for most participating short-stay hospitals certified to render Medicare inpatient hospital services to 30 million eligible Americans. The prospective payment system legislation went into effect on October 1, 1983.

Program payments—Represent, for the most part, payments for inpatient services rendered by short-stay hospitals participating in the Medicare PPS under the HI program. Under PPS, Medicare payments to most hospitals for Part A inpatient operating costs are made on the basis of a predetermined, fixed rate for each diagnosis-related group. This rate constitutes payment in full, and hospitals are prohibited from charging beneficiaries for other than the statutory deductible and coinsurance amounts. Pass-through costs (capital, direct medical education, and kidney acquisition) continue, for the time being, to be reimbursed on a retrospective basis.

Short-stay hospital—General and special hospitals certified as participating facilities under Medicare and reporting average stays of less than 25 days.

Urban and Rural—Area of residence of Medicare beneficiary as designated by the metropolitan statistical area indicators.

Sources and limitations of data

The data in this article were derived from the Health Care Financing Administration (HCFA) short-stay hospital inpatient stay record file. This file is generated by linking information from three HCFA master program files for Medicare beneficiaries. Thus, the statistical stay record provides information on the patient, the hospital, and the hospitalization.

The data are based on a 20-percent sample of inpatient stay records. Therefore, the data are subject to sampling variability. Sample counts were multiplied by a factor of five to estimate population totals.

The data were extracted from short-stay hospital inpatient records received and processed in HCFA as of December 1989. Therefore, 1988 discharges recorded after that date were not included.

Incompleteness of data

The incompleteness of the Medicare provider analysis and review stay record files used to prepare this article is a result of the inherent administrative time lag between the time when a bill (HCFA-1450) is submitted for payment and when it is posted to the central records. A complete count of Medicare discharges from short-stay hospitals in 1988 will probably amount to about 3 percent more than the total figures used in this study.

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