Medicare Part A Utilization and Expenditures for Psychiatric Services: 1995

Carlos Cano, M.D., Kevin D. Hennessy, Ph.D., Joan L. Warren, Ph.D., and James Lubitz, M.P.H.

This study provides an overview of Medicare's current coverage and payment policies regarding hospitalization for psychiatric disorders, and presents new information on demographic, diagnostic, utilization, and expenditure characteristics associated with inpatient psychiatric care among 1995 Medicare beneficiaries. Results suggest that utilization and expenditure patterns for Medicare beneficiaries hospitalized for psychiatric illness in 1995 differ across demographic (e.g., age, sex, race) and diagnostic categories. The implications of these findings for current management of the Medicare program as well as the evolution of Medicare managed care systems for behavioral health services are discussed.

INTRODUCTION

Hospitalizations for mental illness and alcohol and drug addiction represent a substantial cost to the United States health care system. One recent estimate indicates that roughly two-thirds of the $29.8 billion spent by mental health organizations in this country in 1992 were expenditures for hospitalization (Redick et al., 1996). Moreover, this estimate likely understates actual expenditures associated with such hospitalizations, because it excludes both the costs attributable to inpatient treatment of alcohol and drug disorders, as well as hospital expenditures associated with the treatment of medical conditions caused or exacerbated by substance abuse. Despite the efforts of deinstitutionalization over the last several decades, expenditures for hospitalization continue to represent a majority of the costs associated with treatment of individuals with mental and addictive disorders.

This study focuses on Medicare inpatient psychiatric care since there has been limited information to date regarding diagnoses, use, and expenditures for inpatient treatment of psychiatric disorders among Medicare beneficiaries. In addition, the percentage of revenues collected by mental health organizations (such as psychiatric hospitals and psychiatric units in general hospitals) from Federal Government sources (mostly Medicare and Medicaid) has grown from 25 percent in 1990 to 31 percent in 1992. In contrast, funding to these facilities from all other major sources was proportionately smaller in 1992 than in 1990 (Redick et al., 1994; 1996). The relative growth in expenditures for institutional psychiatric services suggests the need for an updated analysis of service utilization and cost under programs funded by the Federal Government.

The goals of the current study are thus threefold: (1) to provide an overview of Medicare's current coverage and payment policies regarding hospitalization for

All the authors are with the U.S. Department of Health and Human Services (DHHS). Carlos Cano is with the Office of the Associate Administrator for Policy in the Health Care Financing Administration (HCFA). Kevin Hennessy is with the Office of the Assistant Secretary for Planning and Evaluation, DHHS. Joan Warren is currently with the National Cancer Institute, but was employed in the Office of Research and Demonstrations (ORD) in HCFA at the time this study was conducted. James Lubitz is with ORD, HCFA. The opinions expressed are those of the authors and do not necessarily reflect those of DHHS, the National Cancer Institute, or HCFA.

psychiatric disorders; (2) to present descriptive statistics that update some of the data provided in earlier reports on psychiatric hospitalizations of Medicare beneficiaries (Freiman, Goldman, and Taube, 1990; Lave and Goldman, 1990); and (3) to provide new information on demographic, diagnostic, utilization, and expenditure characteristics associated with 1995 inpatient psychiatric care among Medicare beneficiaries. Enhancing our understanding of the types of persons being treated and their service utilization and expenditure patterns may enable decisionmakers to monitor (and perhaps modify) Medicare policies and programs to assure the most efficient and effective care delivery to beneficiaries in need of psychiatric services.

PART A AND PSYCHIATRIC PAYMENT POLICIES

The Hospital Insurance (Part A) portion of the Medicare program helps beneficiaries pay for hospital and skilled nursing facility (SNF) services and for home health and hospice care. In general, Medicare Part A benefits for mental and addictive disorders are similar to Part A benefits for physical disorders (Health Care Financing Administration, 1995b). Thus, the benefit policies regarding deductibles, copayments, covered days, and reserve days for acute care in most hospital settings are the same for physical conditions as they are for mental and addictive conditions. However, Part A places a lifetime limit on the amount of services covered in psychiatric hospitals. Once an individual reaches a lifetime limit of 190 total days in a psychiatric facility, Part A ceases to cover the cost of additional days of hospitalization, although Medicare may continue to receive information about that person's hospitalization.

HCFA uses various methods to pay for inpatient psychiatric care under fee-for-service (FFS) coverage. For psychiatric hospitals and distinct psychiatric units of general hospitals—facilities for the most part exempted from the prospective payment system (PPS)—HCFA uses a "reasonable-cost" reimbursement methodology. Payment is on a per discharge basis and is limited by a target amount determined on a facility-specific base year that is adjusted on an annual basis by an inflation factor. Regular beds in short-stay facilities are paid under the diagnosis-related-groups (DRG) method of PPS.[1] The specific DRG weight assigned to psychiatric diagnostic groups is converted to a dollar amount that is then adjusted for factors such as hospital teaching status, local wage rates, and urban-rural location. Units in general hospitals specializing in the treatment of alcohol or drug addiction disorders that meet certain staffing requirements may qualify as distinct psychiatric units. Otherwise, they are not considered PPS-exempted and are paid under the DRG methodology. SNFs are paid reasonable per diem costs up to a limit based on the area wage index. The limit also varies if the SNF is freestanding or a hospital-based facility. Average routine costs were computed in a base year, adjusted for inflation until 1993, and then frozen. Ancillary services, therapies, and drugs are paid in addition at reasonable costs (Ingber, 1996).

Obtaining accurate and reasonably current expenditure data for psychiatric hospitals and units can be difficult given the complexity and the delays associated with cost-based reimbursement. Final payment amounts are based on facility-specific cost reports that may take 2 or

[1] Some distinct psychiatric units in general hospitals with a small volume of Medicare patients (e.g., pediatric hospitals) may choose not to apply for a PPS exemption and are paid under the DRG method as regular hospital beds.

more years to be settled. Interim payments are calculated by fiscal intermediaries based on processed claims and cost reports from previous years. These program payments do not include deductible and coinsurance amounts billed by facilities to beneficiaries.

METHODS

Data for these analyses were obtained from the Medicare Provider Analysis and Review (MEDPAR) file for 1995, maintained by HCFA. MEDPAR data contain a summarized record for 100 percent of all admissions to acute and long-stay hospitals, as well as SNFs.[2] The hospital inpatient records include only completed hospitalizations, while SNF records may include both completed and ongoing stays since discharge dates from these facilities are not always received by HCFA. Thus the MEDPAR file for 1995 contains completed hospitalizations and both completed and ongoing SNF stays taking place in that year.

Beneficiaries enrolled in health maintenance organizations (HMOs) were excluded from our study as most HMOs do not submit bills to Medicare for hospital services. In 1995, these individuals represented approximately 11 percent of all Medicare beneficiaries (Health Care Financing Administration, 1995a). Beneficiaries residing outside of the 50 States and the District of Columbia also were excluded from the study.

For this analysis, records with a principal diagnosis of mental illness or addiction were identified using diagnostic codes from the *International Classification of Diseases, 9th Revision, Clinical Modification* (ICD-9-CM) (Public Health Service and the Health Care Financing Administration, 1994). The principal diagnosis indicates the reason that the person was hospitalized. Psychiatric diagnoses were grouped in the following 7 categories: (1) delirium, dementia, amnestic and other acquired cognitive disorders, e.g., Alzheimer's disease (codes 290.00, 290.99, 293.00, and 294.00 to 294.99); (2) substance-related disorders, such as alcohol or cocaine dependence (codes 291.00 to 292.99, and 303.00 to 305.99); (3) schizophrenia and other psychotic disorders (codes 293.81, 293.82, 295.00 to 295.99, 297.1, 297.3, 298.8, and 298.9); (4) affective disorders, such as major depression or manic-depressive illness (codes 293.83, 296.00 to 296.99, 300.4, 301.13, and 311); (5) anxiety disorders, such as panic disorder and obsessive compulsive disorder (codes 293.89, 300.00 to 300.02, 300.21 to 300.3, 308.3, 309.21, and 309.81); (6) adjustment disorders, which comprise stress-related, clinically significant, and time-limited emotional disturbances (codes 309.0, 309.24, 309.28, 309.3, 309.4, and 309.9); and (7) other psychiatric disorders (all other psychiatric codes not included above). Codes 317 to 319 for mental retardation were excluded.

Identified cases were divided into those occurring in the following settings: psychiatric hospitals; psychiatric units in general hospitals; regular beds in general hospitals (i.e., not within a designated psychiatric unit); and SNFs. To calculate the rate of hospitalization for psychiatric diagnoses in the Medicare population, we created a denominator file that included all persons eligible for Part A coverage as of July 1, 1995, who resided in one of the 50 States or the District of Columbia and who were not enrolled in an HMO. Mean length of stay was calculated using two measures. The first was the length of stay reported for a hospitalization, the second was the length of stay only for those days of care covered

[2] Given that the data presented are based on the entire population of Medicare Part A beneficiaries in FFS with 1995 inpatient psychiatric service use, the data and any comparisons are reported without reference to statistical testing, which is based upon sampling theory.

by Medicare. As noted earlier, we could not calculate length of stay for SNF admissions, as the date that the person is discharged or no longer covered by Medicare is frequently not reported.

The amount that Medicare paid for psychiatric hospitalizations was calculated using interim payments. The interim payment amounts represent the best payment estimates by fiscal intermediaries before a final settlement. These amounts most likely underestimate program final payments for at least two reasons. First, hospitals receive bonus payments when their costs fall under specified target amounts. The number of hospitals receiving bonus payments is likely substantial, since target amounts for a large proportion of providers were set at a time when psychiatric stays were generally much longer than they are at present. Second, a number of hospitals request and obtain exemption payments after their cost reports are settled.

RESULTS

Demographic, Diagnostic, and Service Use Data

Table 1 presents the number of hospital discharges and SNF stays in 1995 for Medicare beneficiaries with a primary psychiatric diagnosis and the rate per 1,000 beneficiaries by type of treatment facility and by age group. Overall, there were 701,099 discharges and SNF stays. Hospital discharges for psychiatric illnesses represented approximately 5.6 percent of all Medicare–covered hospital discharges in 1995.[3]

[3] The MEDPAR file for 1995 shows 11,773,845 hospital discharges and 1,326,326 SNF stays for a total of 13,100,171 hospital discharges and SNF stays. Interim payments in 1995 for inpatient care under Part A amounted to $77,954,563,211 and $7,700,308,203 respectively, for a total of $85,654,871,414.

Psychiatric units of general hospitals accounted for approximately 43 percent of the total of hospital discharges and SNF stays, followed by general hospitals and long-stay or specialty psychiatric hospitals at 26 percent and 24 percent respectively.

Table 2 presents the number and rate of hospital discharges and SNF stays related to psychiatric disorders in 1995 for Medicare beneficiaries by age group, race, and sex. The data indicate that the rate of hospitalization for these disorders varied greatly by age, from a low of 8.5/1,000 for those 65-74 years of age, to a high of 195.8/1,000 for those 25-34 years of age. The rates of hospitalizations for psychotic, affective, and alcohol and drug disorders were particularly high among disabled beneficiaries in the 25-34 and 35-44 year age groups. Rates of hospitalizations or SNF stays for acquired cognitive disorders were highest for beneficiaries 85 years of age or over.

The hospitalization rate for psychiatric disorders among males (25.98 per 1,000) was higher than for females (19.38 per 1,000). Males had higher rates of hospitalizations than females for alcohol and drug disorders across all age groups. Among the disabled through 44 years of age, males had greater rates of hospitalizations for psychotic disorders. Females had higher hospitalization rates for affective disorders, which accounted for over 40 percent of psychiatric stays for all female beneficiaries.

Black beneficiaries were hospitalized for psychiatric disorders at a considerably higher rate (38.12) than white beneficiaries (20.21). The rates were notably higher in the categories of alcohol and drug disorders, psychotic disorders, and, in the case of males, affective disorders.

Tables 3 and 4 present the number and percentage distribution of hospital

Table 1
Number and Percent of Hospital Discharges and Skilled Nursing Facility Stays, and Rate per 1,000 Beneficiaries, for Medicare Beneficiaries With a Primary Psychiatric Diagnosis: 1995

Facility	All Beneficiaries		Rate per 1,000 Medicare Beneficiaries	Beneficiaries Age 65 or Over		Beneficiaries Under Age 65	
	Number of Discharges	Percent Distribution		Number of Discharges	Percent Distribution	Number of Discharges	Percent Distribution
All Facilities	701,099	100	22.19	328,548	100	372,551	100
General Hospitals	183,459	26	5.81	95,142	29	88,317	24
Psychiatric Hospitals	169,093	24	5.35	49,529	15	119,564	32
Psychiatric Units of General Hospitals	302,303	43	9.57	139,462	42	162,841	44
Skilled Nursing Facilities	46,244	7	1.46	44,415	14	1,829	0.5

NOTE: Due to rounding error, total percentages may not equal 100 percent.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

Table 2

Rates of Medicare Hospitalizations and Skilled Nursing Facility Stays for Primary Psychiatric Diagnosis per 1,000 Beneficiaries, by Age Group, Race, and Sex: 1995

Age Group, Race and Sex,	Number of Discharges	Psychiatric Discharges per 1,000 Beneficiaries: All Psychiatric Diagnoses	Adjustment Disorders	Anxiety Disorders	Alcohol and Drug Disorders	Acquired Cognitive Disorders	Affective Disorders	Psychotic Disorders	Other Disorders
All Beneficiaries									
All Ages	701,099	22.19	0.30	0.36	3.31	3.69	7.63	5.83	1.07
1 - 24 Years	10,544	119.3	4.5	2.3	14.0	1.0	43.1	45.0	9.7
25 - 34 Years	92,633	195.8	4.1	2.6	36.2	0.9	63.6	79.5	9.0
35 - 44 Years	140,163	155.8	2.4	1.9	34.0	0.9	49.8	61.8	5.1
45 -54 Years	80,606	75.3	1.1	1.0	16.5	1.0	26.6	26.8	2.4
55 - 64 Years	48,605	30.6	0.4	0.4	5.6	1.7	11.7	9.8	1.1
65 - 74 Years	132,311	8.5	0.1	0.2	1.3	1.5	3.6	1.4	0.4
75 - 84 Years	131,707	14.7	0.1	0.3	0.9	5.9	5.0	1.6	0.9
85 Years or Over	64,530	22.0	0.2	0.3	0.6	12.1	4.7	2.4	1.8
Race									
White	552,513	20.21	0.30	0.37	2.68	3.67	7.45	4.69	1.05
Black	108,962	38.12	0.35	0.25	7.80	4.69	8.58	15.16	1.30
Male Beneficiaries									
All Ages	349,944	25.98	0.37	0.27	5.92	3.45	7.22	7.79	0.96
1 - 24 Years	6,454	119.6	3.89	1.37	17.49	0.94	35.70	51.70	8.47
25 - 34 Years	59,662	202.2	3.64	1.76	45.51	1.01	54.06	90.28	5.98
35 - 44 Years	91,255	163.0	2.25	1.35	45.04	0.98	42.09	67.84	3.41
45 - 54 Years	48,961	76.3	1.00	0.94	23.27	1.02	21.57	26.65	1.89
55 - 64 Years	25,635	28.5	0.37	0.29	7.91	1.80	8.81	8.39	0.96
65 - 74 Years	52,341	7.6	0.10	0.12	1.93	1.60	2.54	0.94	0.36
75 - 84 Years	46,565	13.9	0.16	0.16	1.26	6.30	3.83	1.33	0.84
85 Years or Over	19,071	24.6	0.20	0.15	0.83	14.27	4.72	2.55	1.89
Race									
White	259,683	22.39	0.35	0.28	4.64	3.43	6.77	5.99	0.93
Black	65,672	53.76	0.48	0.22	15.04	4.35	10.09	22.28	1.31
Female Beneficiaries									
All Ages	351,155	19.38	0.26	0.42	1.38	3.87	7.93	4.37	1.15
1 - 24 Years	4,090	118.8	5.40	3.66	8.74	0.46	54.59	34.38	11.53
25 - 34 Years	32,971	185.2	4.75	3.98	20.81	0.58	79.42	61.66	14.00
35 - 44 Years	48,908	143.9	2.66	2.67	15.76	0.65	62.39	51.92	7.86
45 - 54 Years	31,645	73.7	1.13	1.07	6.30	0.88	34.16	26.89	3.25
55 - 64 Years	22,970	33.3	0.40	0.57	2.49	1.56	15.40	11.53	1.38
65 - 74 Years	79,970	9.2	0.10	0.26	0.75	1.45	4.49	1.68	0.46
75 - 84 Years	85,142	15.2	0.13	0.35	0.64	5.60	5.75	1.79	0.91
85 Years or Over	45,459	21.1	0.15	0.33	0.51	11.33	4.62	2.38	1.80
Race									
White	292,830	18.60	0.26	0.43	1.24	3.84	7.95	3.73	1.14
Black	43,290	26.44	0.24	0.27	2.39	4.94	7.46	9.85	1.29

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

Table 3

Number of Hospital Discharges and Skilled Nursing Facility (SNF) Stays for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Age Group and Type of Facility: 1995

Age Group	All Facilities		General Hospitals		Psychiatric Units in General Hospitals		Psychiatric Hospitals		SNFs	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Ages	701,099	100	183,459	100	302,303	100	169,093	100	46,244	100
Under 65 Years	372,551	53	88,317	48	162,841	54	119,564	71	1,829	4
1-24 Years	10,544	2	1,902	1	4,632	2	4,001	2	9	0
25-34 Years	92,633	13	20,092	11	39,980	13	32,482	19	79	0
35-44 Years	140,163	20	33,399	18	60,132	20	46,378	27	254	1
45-54 Years	80,606	11	20,449	11	35,455	12	24,297	14	405	1
55-64 Years	48,605	7	12,475	7	22,642	7	12,406	7	1,082	2
65 Years or Over	328,548	47	95,142	52	139,462	46	49,529	29	44,415	96
65-74 Years	132,311	19	37,959	21	61,219	20	25,527	15	7,606	16
75-84 Years	131,707	19	37,723	21	57,055	19	17,879	11	19,050	41
85 Years or Over	64,530	9	19,460	11	21,188	7	6,123	4	17,759	38

NOTES: Due to rounding error, total percentages may not equal 100 percent.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

Table 4

Percent Distribution of Hospital Discharges and Skilled Nursing Facility (SNF) Stays for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Age Group and Type of Facility: 1995

Age Group	All Facilities	General Hospitals	Psychiatric Units in General Hospitals	Psychiatric Hospitals	SNFs
			Percent		
All Ages	100	26	43	24	7
Under 65 Years	53	24	44	32	0
1-24 Years	2	18	44	38	0
25-34 Years	13	22	43	35	0
35-44 Years	20	24	43	33	0
45-54 Years	11	25	44	30	1
55-64 Years	7	26	47	26	2
65 Years or Over	47	29	42	15	14
65-74 Years	19	29	46	19	6
75-84 Years	19	29	43	14	14
85 Years or Over	9	30	33	9	28

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

discharges and SNF stays for mental and addictive disorders by age group and type of facility. Regardless of age, the largest percentage of discharges for these disorders (43 percent) occurred from psychiatric units in general hospitals. In fact, when all psychiatric and regular beds within general hospitals were included, the data indicate that almost 7 out of 10 hospital discharges and SNF stays for psychiatric conditions occurred in such settings. The likelihood of admission to a SNF, was quite small for beneficiaries under 65 years of age, but increased substantially with age thereafter. For example, almost 4 out of 5 SNF stays for psychiatric disorders (79 percent) were attributable to beneficiaries 75 years of age or over.

The number of hospital discharges and SNF stays for mental and addictive disorders by diagnosis and type of facility, and the percentage distributions for this data are presented in Tables 5 and 6, respectively. The data suggest that there is substantial variability in the diagnostic mix across different types of facilities. More than one-third (34 percent) of all psychiatric hospitalizations and SNF stays involved a diagnosis of affective disorder. The overwhelming majority of these episodes (86 percent) occurred in specialty psychiatric hospitals (40 percent) or psychiatric units of general hospitals (46 percent). Approximately one-fourth (26 percent) of hospitalizations and SNF stays for mental or addictive disorders involved treatment of some form of psychosis. More than four-fifths of this treatment occurred in either psychiatric units of general hospitals (51 percent) or specialty psychiatric hospitals (30 percent). In contrast, hospitalizations for alcohol and drug disorders were much more likely to occur in non-psychiatric wards of general hospitals (61 percent) than in any other type of facility. In fact, more than one-third (35 percent) of all psychiatric discharges from regular beds in general hospitals were related to treatment for substance abuse, compared with approximately 15 percent of similar discharges from specialty psychiatric hospitals, and only 5 percent of similar discharges from psychiatric units of general hospitals. While more than one-half

Table 5

Number of Hospital Discharges and Skilled Nursing Facility (SNF) Stays for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Diagnostic Group and Type of Facility: 1995

Diagnostic Group	All Facilities		General Hospitals		Psychiatric Units in General Hospitals		Psychiatric Hospitals		SNFs	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All Disorders	701,099	100	183459	100	302,303	100	169,093	100	46,344	100
Adjustment Disorders	9,593	1	1721	1	5,619	2	2,131	1	122	0
Anxiety Disorders	11,242	2	4633	3	4,142	1	1,988	1	479	1
Alcohol and Drug Disorders	104,694	15	63408	35	14,289	5	25,420	15	1,577	3
Acquired Cognitive Disorders	116,641	17	43491	24	36,056	12	11,845	7	25,349	55
Affective Disorders	240,990	34	30012	16	137,575	46	68,279	40	5,124	11
Psychotic Disorders	184,054	26	28196	15	93,713	31	54,490	32	7,655	17
Other Disorders	33,885	5	11998	7	10,909	4	4,940	3	6,038	13

NOTES: Due to rounding error, total percentages may not equal 100 percent.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

Table 6
Percent Distribution of Hospital Discharges and Skilled Nursing Facility (SNF) Stays for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Diagnostic Group and Type of Facility: 1995

Diagnostic Group	General Hospitals	Psychiatric Units in General Hospitals	Psychiatric Hospitals	SNFs
		Percent		
Adjustment Disorders	18	59	22	1
Anxiety Disorders	41	37	18	4
Alcohol and Drug Disorders	61	14	24	2
Acquired Cognitive Disorders	37	31	10	22
Affective Disorders	12	57	28	2
Psychotic Disorders	15	51	30	4
Other Disorders	35	32	15	18

NOTES: Due to rounding error, total percentages may not equal 100 percent.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

(55 percent) of all psychiatric-related SNF stays and almost one-fourth (24 percent) of all psychiatric discharges from regular beds in general hospitals involved a primary diagnosis of dementia or other acquired cognitive disorder, relatively few discharges from specialty psychiatric hospitals or psychiatric units in general hospitals involved these diagnoses (7 percent and 12 percent respectively).

Table 7 presents the average length of stay (ALOS) for psychiatric hospitalizations when all days were included, as well as when only Medicare–covered days were included, by type of facility and diagnostic group. The data suggest that when all days were included, the ALOS for these disorders ranged from approximately 1 week (7.9 days) in regular beds of general hospitals, to almost 2 weeks (13.7 days) in psychiatric units of general hospitals, to more than 3 weeks (24.6 days) in specialty psychiatric hospitals. When only Medicare–covered days were included, there was a decline of ALOS to 19.9 days for psychiatric hospitals. Examining the data by diagnostic group reveals that the ALOS for both affective disorders and dementia was almost twice as long as the ALOS for adjustment, anxiety, or alcohol and drug disorders. The ALOS for psychotic disorders was almost 3 weeks (20.9 days), but was somewhat shorter

Table 7
Average Length of Hospitalization and Coverage for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Type of Facility and Diagnostic Group: 1995

Measure	Mean in Days	Standard Deviation	Mean in Covered Days	Standard Deviation
Type of Facility				
General Hospital	7.9	11.2	7.9	11.1
Psychiatric Units in General Hospitals	13.7	13.1	13.7	13.1
Psychiatric Hospitals	24.6	68.1	19.9	49.8
Diagnostic Group				
Adjustment Disorders	7.9	22.8	7.5	17.3
Anxiety Disorders	8.2	15.5	8	10.8
Alcohol and Drug Disorders	8.5	16.7	8.3	13.7
Acquired Cognitive Disorders	14.2	36	13.3	27.6
Affective Disorders	14.4	23.3	13.9	17.
Psychotic Disorders	20.9	56	17.7	40.9
Other Disorders	12.3	35.5	11.3	28.8

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

(17.7 days) when only Medicare-covered days were included. Interestingly, the large standard deviations related to ALOS for psychiatric hospitals, especially for persons admitted with a diagnosis of psychosis, suggest that the length of hospitalization in such facilities is quite variable, and may be rather long (e.g., 2 months or more) for certain patients.

Payment Data

Total interim payments and average interim payments for 1995 Medicare psychiatric hospitalizations and SNF stays by age group were calculated per all Medicare beneficiaries in the same age group (Table 8). Interim payments to hospitals and SNFs for inpatient treatment of mental and addictive disorders totaled almost $3.5 billion in 1995. This figure represents more than 4 percent of the approximately $85.7 billion in Medicare interim payments made to hospitals and SNFs in 1995 for treatment of all physical and mental disorders (see footnote 3). Notably, almost one-half (46.9 percent) of all payments went to reimburse hospitals and SNFs for psychiatric care for beneficiaries under 65 years of age, and approximately one-third of that sum ($597 million) was associated with care for individuals 35-44 years of age.

Table 8 also reveals wide variation in per beneficiary interim payments by age group. Beneficiaries between 25-34 years of age were associated with the largest per beneficiary interim payments ($834), which were almost 18 times higher than those made on behalf of beneficiaries with the smallest average interim payments ($47 for beneficiaries between 65-74 years of age). Moreover, the average interim payment per beneficiary for those under 65 years of age ($397) was almost 6 times higher than for those age 65 or over ($67), and even 3 times larger than average interim payments for the oldest group of Medicare beneficiaries ($119 for those 85 years of age or over).

Table 9 provides total and per discharge interim payments for 1995 Medicare psychiatric services by diagnostic group and type of facility. Discharges of beneficiaries with a primary diagnosis of alcohol or drug-related disorders constituted 17 percent of total discharges but accounted only for slightly more than 10 percent of total interim payments to facilities.

Table 8

Total Interim Payments and Interim Payments per Beneficiary for Medicare Hospital Discharges and Skilled Nursing Facility Stays for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Age Group: 1995

Age Group	Interim Payments to Facilities	Percent of Total Interim Payments	Payment per Beneficiary in Age Group
All Ages	$3,486,434,068	100.00	$110.35
Under 65 Years	1,635,030,470	46.90	396.86
1-24 Years	44,243,533	1.27	500.37
25-34 Years	394,730,601	11.32	834.44
35-44 Years	597,495,572	17.14	664.01
45-54 Years	358,746,138	10.29	335.03
55-64 Years	239,814,626	6.88	151.03
65 Years or Over	1,851,403,598	53.10	67.38
65-74 Years	738,940,579	21.19	47.43
75-84 Years	765,488,859	21.96	85.37
85 Years or Over	346,974,160	9.95	118.51

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

Table 9

Total Interim Payments and Interim Payments per Hospital Discharge and per Skilled Nursing Facility Stay for Medicare Beneficiaries With a Primary Psychiatric Diagnosis, by Type of Facility and Diagnostic Group: 1995

Diagnostic Group	All Settings		General Hospitals		Psychiatric Units in General Hospitals		Psychiatric Hospitals		SNFs	
	Total	per Discharge	Total	per Discharge	Total	per Discharge	Total	per Discharge	Total	per Discharge
All Disorders	$3,486,434,068	$4,693	$648,507,624	$3,535	$1,782,920,199	$5,898	$857,777,167	$5,073	$197,229,078	$4,265
Adjustment Disorders	12,448,297	2,711	1,994,471	2,447	7,154,206	2,548	3,169,783	2,518	129,837	3,329
Anxiety Disorders	43,484,817	4,170	12,751,057	2,752	18,507,768	4,468	10,137,268	5,099	2,088,724	4,361
Alcohol and Drug Disorders	350,670,005	3,802	181,264,617	2,859	52,037,830	3,642	110,494,127	4,347	6,873,431	4,359
Acquired Cognitive Disorders	604,276,126	5,340	170,747,674	3,926	255,750,061	7,093	73,587,538	6,213	104,190,853	4,127
Affective Disorders	1,356,581,383	5,049	117,282,266	3,908	844,095,686	6,136	371,036,704	5,434	24,166,727	4,716
Psychotic Disorders	951,856,150	4,763	119,948,123	4,254	539,396,289	5,756	259,778,027	4,767	32,733,711	4,276
Other Disorders	153,785,039	4,684	42,340,686	3,529	57,502,864	5,271	27,229,454	5,512	26,712,035	4,424

NOTE: SNF is skilled nursing facility.

SOURCE: Health Care Financing Administration, Bureau of Data Management and Strategy: Medicare Provider Analysis and Review (MEDPAR) file, 1995.

The data also indicate fairly wide variations by facility type in both the total amount of interim payments and the per discharge payments. More than one-half (51.1 percent) of all Medicare Part A interim payments for psychiatric services went to psychiatric units in general hospitals, with approximately one-fourth to specialty psychiatric hospitals (24.6 percent), almost one-fifth to regular beds in general hospitals (18.6 percent), and less than one-tenth (5.6 percent) to SNFs. When treatment for all disorders are considered together, per discharge interim payments are lowest to regular beds in general hospitals ($3,535), followed by SNFs ($4,265), psychiatric hospitals ($5,073), and psychiatric units in general hospitals ($5,898). Comparing these data with ALOS data from Table 7 suggests that, while the average length of hospitalization (including only Medicare–covered days) in specialty psychiatric facilities is almost 50 percent longer than in psychiatric units of general hospitals, the per discharge interim payments to psychiatric units in general hospitals are 16 percent higher than similar per discharge payments to specialty psychiatric hospitals.

Wide variations in per discharge interim payments are also noted among different types of facilities by diagnostic group. Per discharge payments related to treatment of psychotic disorders, affective disorders, or dementia in psychiatric units of general hospitals were substantially more than per discharge payments for treatment of similar disorders in any of the three other facility types. Similarly, per discharge payments related to treatment of alcohol and drug disorders in either psychiatric hospitals or SNFs were substantially higher than per discharge payments for treatment of similar disorders in either psychiatric units or non-psychiatric beds within general hospitals. The considerable variation in per discharge interim payments by facility type is consistent with Freiman, Goldman, and Taube's (1990) examination of 1985 Medicare data for average covered costs of psychiatric hospitalizations.

DISCUSSION

The data presented in this article provide an overview of demographic, diagnostic, utilization, and expenditure characteristics associated with the delivery of Medicare Part A services to beneficiaries with mental and addictive disorders in 1995. Comparison with previous studies (Freiman, Goldman, and Taube, 1990; Lave and Goldman, 1990) suggests that the rate of hospitalizations among Medicare beneficiaries for treatment of mental or addictive disorders almost doubled in the past decade, from approximately 11 to 21 discharges per 1,000 beneficiaries.[4] Although the rate of discharges is quite variable across age group and race, the overall rate would appear to be substantially higher than recent epidemiological estimates (9.0/1,000) of the use of inpatient psychiatric services by the general population (Bourdon et al., 1994). The growth in the rate of inpatient psychiatric hospitalization for Medicare beneficiaries also contrasts with the decrease in the overall rate of inpatient psychiatric admissions among the general population nationwide between 1990 and 1992, the last year for which published data are available (Redick et al., 1996).

A variety of factors affecting the demand and supply of services may explain the significant increase in utilization of inpatient psychiatric care for Medicare beneficiaries in recent years. On the demand side, the rise may be related in part to the substantial growth since 1986 in the number of Medicare beneficiaries

[4] For purposes of comparison, SNF stays were excluded from the calculation of the 1995 rate.

under 65 years of age, in particular those disabled by mental impairments (Kennedy and Manderscheid, 1992). Medicare beneficiaries under 65 years of age (i.e., individuals who qualified for Medicare due to disability) represented only 12 percent of all beneficiaries in 1995 (Health Care Financing Administration, 1995a) but accounted for more than one-half (53.1 percent) of all hospital discharges and SNF stays attributable to mental or addictive disorders.

On the supply side, increased capacity nationwide in private psychiatric facilities may also account in part for the rise in Medicare psychiatric hospitalizations (Redick et al., 1996). Bed rates per 100,000 population for private psychiatric hospitals and non-Federal general hospital psychiatric inpatient services experienced moderate growth between 1980 and 1990 (Redick et al., 1994). A certain degree of supplier-induced demand for Medicare beneficiaries may have occurred also because Medicare payments to PPS-exempted facilities have been more generous compared with those made by other payors during the early 1990s (U.S. Bureau of Labor Statistics, 1994). Moreover, third-party authorization for admissions and extended stays are not required for Medicare beneficiaries under fee-for-service, whereas these utilization management practices have become commonplace during this period in both private and (to a lesser extent) public programs.

In the future, changing attitudes among the elderly that have resulted in less stigma associated with the use of counseling and psychiatric care (Borinstein, 1992) may reinforce the trend toward greater use of psychiatric services. The influx of younger, more disabled beneficiaries, who tend to remain enrolled in the Medicare program for longer periods, is also likely to increase utilization and expenditures for a range of psychiatric and non-psychiatric Medicare services (Kennedy and Manderscheid, 1992). An ongoing concern for program administrators is the risk that beneficiaries with mental illness and addictive disorders (a relatively vulnerable group) may be subject in an unmanaged fee-for-service environment to provider-induced demand for better reimbursed (but not necessarily more appropriate) services.

The data on treatment settings show that general hospitals, and particularly psychiatric units within these facilities, continue to provide the majority of inpatient treatment services to Medicare beneficiaries with psychiatric disorders. Yet that pattern may be changing. Comparisons with 1985 data (Freiman, Goldman, and Taube, 1990) reveal that during the past decade psychiatric hospitals have assumed a greater role delivering inpatient services to Medicare beneficiaries. In 1985, almost four-fifths (79.6 percent) of discharges occurred from general hospitals (including psychiatric units), while one-fifth (19.4 percent) occurred from specialty psychiatric hospitals (Freiman, Goldman, and Taube, 1990). In 1995, the percentage of discharges from general hospitals (including psychiatric units) had declined to 74.2 percent, while the percentage of those from psychiatric hospitals had increased to 25.8 percent. Part of the explanation for this change may be related to the growth of disabled Medicare beneficiaries, who accounted for more than two-thirds (70.7 percent) of all Medicare discharges for psychiatric and addictive disorders from psychiatric hospitals.

The finding that inpatient care for addictive disorders represents 17 percent of all discharges and only 10 percent of payments may indicate underdiagnosis and relatively low utilization for these disorders since they have been associated with roughly 30 percent of persons receiving inpatient services for mental illness and addictions in the general population (Bourdon et al., 1994).

There are several limitations to the data presented in this study. The race categories used were white and black. Data were not broken down by other categories such as Hispanic, Native-American, or Asian-American because the accuracy of these codes in the Medicare data system has not yet been verified. With respect to psychiatric hospital settings, we were unable to distinguish hospitals that are State-administered from those that are private. These two types of facilities differ in the populations they serve, the intensity of services provided, and the average length of patients' stay. Internal HCFA data show, for instance, that ALOS in 1993 for both proprietary and not-for-profit private psychiatric hospitals was less than 17 days whereas government-run facilities had an ALOS of over 77 days. In addition, the data presented in this study include only inpatient psychiatric hospitalizations in the fee-for-service component of the Medicare program, but do not include payments to individual practitioners for inpatient care or payments for any outpatient (Part B) services. Recent programmatic changes to expand coverage for other benefits (i.e., partial hospitalization and outpatient benefits enacted through the Omnibus Budget Reconciliation Acts, 1987, 1989, 1990) have increased overall utilization of psychiatric services by Medicare beneficiaries. To understand fully the sociodemographic, epidemiological, and service patterns of psychiatric utilization will require joint study of inpatient, partial hospitalization, and other outpatient services in both the fee-for-service and HMO sectors of the Medicare program.

Our understanding of the impact of mental illness on the Medicare program will still be limited, however, unless the use of other forms of medical care by beneficiaries receiving psychiatric services is also taken into account. Persons with mental illnesses and addictions tend to use more medical care than the average beneficiary often as a substitute for less readily available behavioral health services (Fuller, 1995). Conversely, certain subgroups of persons with severe mental illnesses and addictions may, in fact, need more medical care than the average beneficiary, a need at times unmet. The literature suggests, for example, that individuals with schizophrenia have high mortality rates from non-psychiatric medical causes at a younger age than individuals without the disorder (Massachusetts Critical Incident Reporting Task Force, 1995). Better data on the use of psychiatric and general medical services for these populations would improve our understanding of the relationship between virtually separate systems of care: how use of behavioral care affects use of general medical care and vice versa, and—perhaps more importantly—how to better integrate both types of services.

Managed Care Implications

The likely increase in future use of Medicare inpatient psychiatric services may be altered by the influence of managed care. In recent years, the private sector has witnessed a revolution in the provision of mental health and substance abuse services (Iglehart, 1996). In the late 1980s, corporate purchasers of health insurance saw the cost of coverage for mental health and substance abuse services increase at a faster pace than general medical services, primarily driven by high utilization of inpatient services (Frank, Salkever, and Sharfstein, 1991). An industry almost non-existent a decade ago emerged to meet the need for cost containment of these private purchasers of care. Among various management practices, these programs have substituted less costly forms of treatment for more costly health services, primarily inpatient care. As a consequence, the patterns of utiliza-

tion for psychiatric conditions including the service settings utilized have changed dramatically. In the case of inpatient psychiatric care, management has generally reduced the number of hospital admissions as well as shortened the average length of hospital stays.

Questions about the appropriateness of current inpatient utilization rates as well as the quality, mix, and coordination of inpatient and outpatient behavioral health services under Medicare may warrant consideration of a variety of potential changes in the delivery of these services. For example, HCFA could seek authority to adopt some of the third-party management practices used in the private sector (e.g., concurrent review of psychiatric services). Another possibility is to consider—perhaps through a carve-out in fee-for-service Medicare—a demonstration on the use of case management for behavioral health services with the goal of providing care in the least restrictive setting and improving coordination of needed services for beneficiaries with the most severe and persistent mental disorders. This type of demonstration might also examine the benefit of including expanded coverage for psychotropic drugs in certain complex and costly-to-treat cases.

A common basis for setting payment rates in managed behavioral health care contracting is the use of past utilization by the covered population in question (Frank, McGuire, and Newhouse, 1995). This study provides evidence about variations in spending for different subpopulations, particularly age-groups, documenting significant differences in cost between the under the 65 years of age and the 65 years of age or over categories and within these groups as well. These age-based distinctions may provide information necessary to assist in setting actuarial or capitation rates for behavioral health services.

With respect to Medicare HMOs, little is known specifically about access and cost of psychiatric services for the increasing proportion of Medicare beneficiaries already enrolled in managed care. The findings reported in this study also suggest the need to explore the adequacy and types of subcapitation rates presently paid by the large proportion of Medicare HMOs that subcontract for the provision of behavioral health services. In addition, the data illustrate the fact that high-cost users of psychiatric care may be readily identifiable just by age, creating an opportunity for health care plans—given their current responsibility over beneficiary enrollment—to favorably select lower-cost beneficiaries. Given this and other potential concerns, there is need to monitor the evolution of Medicare risk HMOs in this service sector.

At a time when the debate to reform Medicare is gaining momentum, a question in the fee-for-service Medicare behavioral health care area for program administrators is whether Medicare should adopt and adapt management techniques broadly utilized in other public and private programs. Research that documents Medicare demographic, diagnostic, utilization, and expenditure trends in behavioral health care, and studies comparing these data with trends in both the private and public sectors should prove useful for policymakers charged with the responsibility of reforming and improving the Medicare program.

ACKNOWLEDGMENTS

The authors would like to thank Sharman Stephens and an anonymous reviewer for their helpful comments on this article.

REFERENCES

Borinstein, A: Public Attitudes Toward Persons With Mental Illness. *Health Affairs* 11:186-196, Fall 1992.

Bourdon, K.H., Rae, D.S., Narrow, W.E., et al.: National Prevalence and Treatment of Mental and Addictive Disorders. *Mental Health, United States,* 1994. Rockville, MD, 1994.

Frank, R.G., McGuire, T., and Newhouse, J.: Risk Contracts in Managed Mental Health Care. *Health Affairs* 14:50-64, Fall 1995.

Frank, R.G., Salkever, D.S., and Sharfstein S.S.: A New Look at Rising Mental Health Insurance Costs. *Health Affairs* 10:116-123, Summer 1991.

Freiman, M.P., Goldman, H.H., and Taube, C.A.: Hospitalization for Psychiatric Illness Under Medicare, 1985. *Hospital and Community Psychiatry* 41:51-58, January 1990.

Fuller, M.G.: More is Less: Increasing Access as a Strategy for Managing Health Care Costs. *Psychiatric Services* 46:1015-1017, November 1995.

Health Care Financing Administration: *Profiles of Medicare: 30th Anniversary.* Washington. U.S. Government Printing Office, 1995a.

Health Care Financing Administration: *Your Medicare Handbook, 1995.* Washington. U.S. Government Printing Office, 1995b.

Iglehart, J.K.: Managed Care and Mental Health. *The New England Journal of Medicine* 334:131-135, January 11, 1996.

Ingber, M.: Personal communication. Office of Research and Demonstrations, Health Care Financing Administration. Baltimore, MD. November 1996.

Kennedy, C. and Manderscheid, R.: SSI and SSDI Disability Beneficiaries With Mental Disorders. *Mental Health, United States: 1992.* Rockville, MD, 1992.

Lave, J.R., and Goldman, H.H.: Medicare Financing for Mental Health Care. *Health Affairs* 9:19-30, Spring 1990.

Massachusetts Critical Incident Reporting Task Force: *Report on Massachusetts Department of Mental Health Service Recipient Mortality (1991-1993).* 1995.

Public Health Service and Health Care Financing Administration: *International Classification of Diseases, Ninth Revision, Clinical Modification,* Vol. 1. DHHS Publication Number 80-1260. U.S. Government Printing Office, 1994.

Redick, R.W., Witkin, M.J., Atay, J.E., and Manderscheid, R.W.: Highlights of Organized Mental Health Services in 1990 and Major National and State Trends. *Mental Health, United States, 1996.* Rockville, MD, 1996.

Redick, R.W., Witkin, M.J., Atay, J.E., and Manderscheid, R.W.: Highlights of Organized Mental Health Services in 1992 and Major National and State Trends. *Mental Health, United States, 1994.* Rockville, MD, 1994.

U.S. Bureau of Labor Statistics: *Employee Benefits in Medium and Large Private Establishment, 1993.* Washington. U.S. Government Printing Office, 1994.

Reprint Requests: Carlos Cano, M.D., Health Care Financing Administration, Room 325-H, Hubert Humphrey Building, 200 Independence Avenue, SW, Washington, DC 20201. E-mail: CCano@hcfa.gov