Spending For Mental Health And Substance Abuse Treatment, 1996

The first comprehensive look at nationwide spending trends in this decade.

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MENTAL HEALTH AND substance abuse (MH/SA) services are a significant component of health care services. The need for information about the MH/SA services sector is compelling because all health care delivery systems are rapidly changing, and MH/SA services are affected by these changes. Unfortunately, there is no routine source of financing and expenditure information similar to that for health services generally. Seven major studies of MH/SA expenditures have been conducted over the past two and a half decades.[1] One of the most recent studies, by Dorothy Rice and colleagues and based on data from 1984, estimated that direct expenditures for MH/SA services were $47.5 billion in 1985 ($6.3 billion for alcohol abuse, $1.9 billion for drug abuse, and $39.3 billion for mental illness). Although Richard Frank and colleagues updated Rice's figures to 1990, their estimates are based on the same surveys used in the Rice study.[2] Thus, even the most recent MH/SA spending estimates use information that is now nearly fifteen years old.

Two other serious problems exist with these studies. First, each provides only a snapshot of MH/SA expenditures; none attempted to assess trends. Because each used different definitions and methodologies, it is extremely difficult to identify trends by comparing the studies. This shortcoming limits our ability to understand the possible impact of economic, demographic, and political forces on the MH/SA service system.

Second, we cannot readily compare the results of these studies with figures for health care generally. Estimates of national health spending are produced annually by the Health Care Financing Administration (HCFA). These estimates, derived from a variety of sources, show health expenditures by major payment source and type of service. To be most useful, estimates of MH/SA spending should be derived and presented in a way that allows direct comparisons with these figures. Even though many MH/SA expenditures are captured in HCFA's National Health Accounts (NHA), previous MH/SA estimates used categories and/or methods that prevent

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ready comparisons with HCFA's figures.

This paper presents estimates of national MH/SA expenditures in 1996, by payer and type of service, derived from the most recently available data sources. We also estimate trends from 1986, using the same categories, data sources, and methodologies. Finally, we have adjusted these estimates to allow direct comparisons with the figures for national health care spending produced by HCFA.

Study Methods

This study focuses on formal health care services used to diagnose and treat MH/SA conditions. It differs from other studies such as Rice's, which included costs not directly related to treatment—for example, the impact of mental illness on productivity and costs attributed to drug-related crimes. It also excludes spending on illnesses that are partially a consequence of MH/SA conditions (for example, cirrhosis of the liver).

"Expenditures for MH/SA diagnosis and treatment reached $79.3 billion in 1996. The largest share went for treating mental illness."

■ **DIAGNOSTIC CATEGORIES.** Estimates have been distributed by spending for alcohol abuse, other substance abuse, and other mental disorders. Because of providers' reporting limitations, spending for persons with both drug and alcohol abuse was allocated to the "other substance abuse" category. Where feasible, allocations to the three diagnostic categories were based on the first listed diagnosis.[3]

■ **PROVIDER TYPES.** The estimates are categorized as belonging either to the general service sector or the sector specialty. The general service sector includes community hospitals, nursing homes, nonpsychiatrist physicians, home health agencies, and prescription drugs dispensed by retail outlets. Specialty providers include psychiatric hospitals; psychiatrists; private practice psychologists, counselors, and social workers; residential treatment centers for children; multiservice mental health organizations; specialty substance abuse centers; and other facilities for substance abuse treatment (such as facilities in correctional settings). Excluded from the estimates are nondurable medical supplies (other than prescription drugs), durable medical equipment, and administrative, research, and facility construction costs.

■ **ESTIMATION APPROACHES.** We used HCFA's estimates of health care spending as control totals for the estimates of expenditures on general service providers and private practice psychologists, counselors, and psychiatrists. Some MH/SA specialty services, however, lie outside the bounds of HCFA's National Health Accounts, and some are not specifically identifiable within these accounts. Because of this exclusion and the lack of data to isolate MH/SA treatment from other care, it was necessary to use different estimation methods for most speciality providers.

For the general service sector our estimation approach was to carve out of the NHA the portion of expenditures devoted to MH/SA diagnosis and treatment by type of service and source of funds. The NHA reports health care spending for all diagnoses. The methodology for general service providers is to distribute the NHA estimates to the three diagnostic groups relevant to this study and to a group of all other diagnoses. This methodology takes advantage of the NHA distributions by source of payment. For each provider, the NHA expenditures for each payer are allocated by diagnosis.

The methodology accounts for differences in use of services across diagnostic groups for a particular payer. It also reflects differences in the unit charges for MH/SA services relative to average charges for all diagnoses. Further, it incorporates differences in payment rates resulting from differential discounts and cost sharing across diagnosis groups. Most estimates are derived from nationally representative public-use, provider-based survey data.[4] For the years that utilization or cost data were not available, projected information

was used.

We modified the methods in some cases, when additional information was available. For example, physician inpatient services were allocated based on aggregate payments alone without an intermediate determination of the relative number of services for MH/SA treatment and diagnosis because information on aggregate payments was available.

Estimates for specialty providers were derived using provider revenue information available from surveys of MH/SA service providers by the Substance Abuse and Mental Health Services Administration (SAMHSA). These surveys (the Inventory of Mental Health Organizations and the Uniform Facility Data System) ask providers to indicate their total expenditures by payer sources and patient type. These data were cleaned, and missing data were imputed.[5]

EXHIBIT 1
Estimated Mental Health And Substance Abuse (MH/SA) Spending, By Type Of Provider And Diagnosis, Millions Of Dollars, 1996

	Mental health		Alcohol abuse[a]		Other drug abuse[b]		Total MH/SA	
Provider type	Dollars (millions)	Percent	Dollars (millions)	Percent	Dollars (millions)	Percent	Dollars (millions)	Percent
Total MH/SA spending	$66,704	100.0%	$4,962	100.0%	$7,614	100.0%	$79,280	100.0%
General service providers								
Community hospitals[c]	10,774	16.2	2,137	43.1	1,328	17.4	14,239	18.0
Physicians	6,558	9.8	330	6.7	223	2.9	7,112	9.0
Home health	277	0.4	8	0.2	12	0.2	297	0.4
Nursing homes	4,714	7.1	150	3.0	26	0.3	4,890	6.2
Retail prescription drugs	5,871	8.8	22	0.4	–[d]	–[d]	5,893	7.4
Total general service	28,195	42.3	2,647	53.4	1,588	20.9	32,431	40.9
Specialty providers								
Psychiatric hospitals	11,083	16.6	322	6.5	841	11.0	12,246	15.4
Psychiatrists	3,682	5.5	179	3.6	125	1.6	3,986	5.0
Other professionals[e]	9,475	14.2	49	1.0	122	1.6	9,646	12.2
Residential treatment centers for children[f]	2,642	4.0	0	0.0	208	2.7	2,851	3.6
Multiservice mental health organizations[g]	11,627	17.4	403	8.1	533	7.0	12,562	15.8
Specialty substance abuse centers[h]	0	0.0	867	17.5	3,455	45.4	4,322	5.5
Other facilities for substance abuse[i]	0	0.0	495	10.0	741	9.7	1,236	1.6
Total specialty providers	38,509	57.7	2,315	46.6	6,026	79.1	46,850	59.1

SOURCE: Authors' analysis of national survey data (see Note 4 in text).

NOTE: Expenditures are limited to MH/SA treatment.

[a] Includes patients with primary alcohol problems (based on first listed diagnosis for general service sector and for specialty sector on provider classification as alcohol only).

[b] Includes patients with primary drug disorders and patients with combined drug and alcohol disorders (based on first listed diagnosis for general service sector and for specialty sector on provider classification of drug only or alcohol and drug).

[c] Includes psychiatric units.

[d] We allocated retail pharmaceutical expenditures based on their indicated use and assumed that there were no approved retail medications to treat drug abuse. Expenditures on medications dispensed by a provider were allocated to that provider.

[e] Includes psychologists, counselors, and social workers.

[f] Estimates are based on a survey that did not distinguish alcohol from other substance abuse. All expenditures were assigned to "other drug abuse."

[g] Comprises a variety of providers, including community mental health centers, residential treatment facilities for the mentally ill, and partial-care facilities. Some providers treat persons with substance abuse problems.

[h] Includes methadone maintenance clinics and other facilities that primarily serve persons with substance abuse problems. Assumes that all services provided are primarily for treatment of substance abuse disorders.

[i] Constituted of facilities with units with specialized staff and treatment for substance abuse such as public health clinics, ambulatory treatment providers, health maintenance organization (HMO) centers, charitable organizations, correctional facility settings, and other entities. These organizations have substance abuse as a secondary mission. Assumes that all services provided are primarily for treatment of substance abuse disorders.

RESULTS

■ **OVERVIEW.** We estimate that expenditures for MH/SA diagnosis and treatment reached $79.3 billion in 1996 (Exhibit 1). The largest share of these expenditures ($66.7 billion) went to treating mental illness. About $5.0 billion was for alcohol abuse, and $7.6 billion, for abuse of other substances (with or without alcohol abuse).

MH/SA services have long been delivered in settings and by providers who primarily or solely treat persons with MH/SA conditions. Approximately 59.1 percent of MH/SA expenditures in 1996 were for specialty providers.

For all types of providers, community and psychiatric hospitals combined accounted for the largest share of MH/SA expenditures (33.4 percent). Individual practitioners (general service physicians, psychiatrists, and other specialty professionals) made up 26.2 percent of MH/SA expenditures, of which 19 percent was for psychiatrists, 34 percent for general physicians, and nearly half (47 percent) for other specialty professionals. Multiservice mental health organizations also made up a significant share of the pie (15.8 percent). Retail prescription drugs and nursing homes each made up less than 10 percent of MH/SA expenditures.

The public sector plays a major role in the provision of MH/SA services: More than half of the funding for MH/SA treatment came from public-sector payers in 1996, with Medicaid and other state and local government funding accounting for nearly 20 percent each (Exhibit 2). Medicare made up 13.4 percent of total MH/SA expenditures, and other federal government programs made up 3.8 percent. Private health insurance paid 26.3 percent of the expenditures. Clients' out-of-pocket expenditures made up 16 percent, and other private sources equaled 3.5 percent.

■ **MENTAL ILLNESS, ALCOHOL ABUSE, AND OTHER DRUG ABUSE.** Spending on the treatment of persons with mental illness, alcohol abuse, and other drug abuse was distributed unevenly among various providers (Exhibit 1). The general service sector made up 42.3 percent of expenditures for treatment

EXHIBIT 2
Estimated Mental Health And Substance Abuse (MH/SA) Spending, By Source Of Payment And Diagnosis, Millions Of Dollars, 1996

	Mental health		Alcohol abuse[a]		Other drug abuse[b]		Total MH/SA	
Provider type	Dollars (millions)	Percent	Dollars (millions)	Percent	Dollars (millions)	Percent	Dollars (millions)	Percent
Total MH/SA spending	$66,704	100.0%	$4,962	100.0%	$7,614	100.0%	$79,280	100.0%
Private								
Client out-of-pocket	11,608	17.4	392	7.9	684	9.0	12,685	16.0
Private insurance	17,911	26.9	1,419	28.6	1,535	20.2	20,865	26.3
Other private sources	2,112	3.2	294	5.9	360	4.7	2,766	3.5
Total private	31,632	47.4	2,105	42.4	2,580	33.9	36,316	45.8
Public								
Medicare	9,607	14.4	608	12.2	441	5.8	10,655	13.4
Medicaid[c]	12,585	18.9	832	16.8	1,021	13.4	14,439	18.2
Other federal government[d]	1,322	2.0	465	9.4	1,256	16.5	3,044	3.8
Other state/local government	11,558	17.3	952	19.2	2,316	30.4	14,826	18.7
Total public	35,073	52.6	2,857	57.6	5,034	66.1	42,964	54.2

SOURCE: Authors' analysis of national survey data (see Note 4 in text).
NOTE: Expenditures are limited to MH/SA treatment.
[a] Includes patients with primary alcohol problems (based on first listed diagnosis for general service sector and for specialty sector on provider classification as alcohol only).
[b] Includes patients with primary drug disorders and patients with combined drug and alcohol disorders (based on first listed diagnosis for general service sector and for specialty sector on provider classification of drug only or alcohol and drug).
[c] Includes both state and federal Medicaid expenditures.
[d] Includes Veterans Affairs, Department of Defense, and federal block grants.

of mental illness, 53.4 percent of expenditures for treatment of alcohol abuse, and 20.9 percent of expenditures for substance abuse services. Spending for mental health services was most likely to be for care provided by multiservice mental health organizations, followed by psychiatric hospitals and community hospitals. Almost half of the expenditures on alcohol abuse treatment were for treatment in community hospitals, followed by specialty substance abuse facilities and other facilities for substance abuse (Exhibit 1). In contrast, almost half of spending amounts for treatment of persons with other substance abuse was for treatment in specialty substance abuse facilities, followed by community hospitals and psychiatric hospitals. The significant portion of alcohol and substance abuse treatment expenditures going to hospitals may have been for detoxification services rather than rehabilitative treatment.

Unlike spending by provider, spending by payer was distributed fairly evenly within each diagnostic group, with a few exceptions. Public expenditures played a marginally smaller role in the provision of treatment for mental illness than for alcohol or substance abuse (Exhibit 2). Furthermore, state and local governments, outside of their roles in the Medicaid program, played a greater role in the provision of treatment for substance abuse than for mental illness or alcohol abuse. Around 30 percent of expenditures for substance abuse treatment were paid for by state and local governments, versus 17 percent for mental illness and 19 percent for alcohol abuse. Similarly, the federal government, outside of its role in the Medicaid program, played a disproportionately greater role in the treatment of substance abuse than in the treatment of mental illness or alcohol abuse. On the other hand, the proportion of treatment for mental illness paid out-of-pocket (17.4 percent) was roughly twice as high as the proportion of treatment for other drug abuse (9 percent) and alcohol abuse (7.9 percent) paid out-of-pocket, probably reflecting the greater role of the public sector in providing alcohol and other drug abuse treatment.

■ **TRENDS IN SPENDING.** MH/SA expenditures grew from $39.5 billion in 1986 to $79.3 billion in 1996, an average annual rate of 7.2 percent. In comparison, the Consumer Price Index (CPI) grew by 3.5 percent annually over this period.

By diagnosis and type of provider. Rates of growth in spending show significant variability by diagnosis. From 1986 through 1996 spending for mental health services grew by 7.3 percent annually, spending for treatment of alcohol abuse grew by only 1.7 percent annually, and spending for treatment of substance abuse grew by 13.2 percent annually (Exhibit 3).

MH/SA spending for community hospitals increased by 8.1 percent annually between 1986 and 1996, whereas spending for psychiatric hospitals grew by only 3.8 percent annually. Underlying the slow growth rate of psychiatric hospital expenditures is the fact that hospitals' average daily census declined from 130,000 in 1986 to 90,000 in 1996.

Among the providers examined, the average annual growth rate was greatest for MH/SA spending in home health care agencies (26.6 percent). The growth of home health care spending has been well documented.[6] Nevertheless, home health care spending represented less than 0.5 percent of total MH/SA spending in 1996 (Exhibit 1).

Residential treatment centers for children (13.1 percent) and other facilities for substance abuse treatment (13 percent) experienced the next-greatest average annual growth rate after home health care agencies. "Other facilities for substance abuse" are community-based providers, largely nonprofit (including government), that primarily deliver ambulatory care. These also include some detoxification centers.

Expenditures for health professionals who bill independently, such as counselors and psychologists, grew approximately 8.5 percent annually between 1986 and 1996. Part of this growth may be attributable to an increase in the number of providers. According to Susan Ivey and colleagues, from 1989 to 1995 there was a 16 percent increase in the number

EXHIBIT 3
Estimated Average Annual Growth Rate In Mental Health And Substance Abuse (MH/SA) Spending, By Type Of Provider, 1986–1996

Provider type	Mental health	Alcohol abuse[a]	Other drug abuse[b]	Total MH/SA
Total MH/SA spending	7.3%	1.7%	13.2%	7.2%
General service providers				
Community hospitals[c]	8.9	4.5	8.0	8.1
Physicians	9.1	6.8	10.7	9.0
Home health	26.6	26.6	26.6	26.6
Nursing homes	0.7	2.4	14.8	0.8
Retail prescription drugs	9.6	9.6	–[d]	9.6
Total	7.2	4.7	8.5	7.0
Specialty providers				
Psychiatric hospitals	4.4	−9.9	8.8	3.8
Psychiatrists	7.4	4.6	8.7	7.3
Other professionals[e]	8.5	−0.7	18.7	8.5
Residential treatment centers for children[f]	12.8	0.0	18.3	13.1
Multiservice mental health organizations[g]	8.8	3.4	14.7	8.7
Specialty substance abuse centers[h]	0.0	−1.1	16.9	9.8
Other facilities for substance abuse[i]	0.0	9.9	15.7	13.0
Total	7.3	−0.9	14.8	7.4

SOURCE: Authors' analysis of national survey data (see Note 4 in text).
NOTE: Expenditures are limited to MH/SA treatment.
[a] Includes patients with primary alcohol problems (based on first listed diagnosis for general service sector and for specialty sector on provider classification as alcohol only).
[b] Includes patients with primary drug disorders and patients with combined drug and alcohol disorders (based on first listed diagnosis for general service sector and for specialty sector on provider classification of drug only or alcohol and drug).
[c] Includes psychiatric units.
d We allocated retail pharmaceutical expenditures based on their indicated use and assumed that there were no approved retail medications to treat drug abuse. Expenditures on medications dispensed by a provider were allocated to that provider.
[e] Includes psychologists, counselors, and social workers.
[f] Estimates are based on a survey that did not distinguish alcohol from other substance abuse. All expenditures were assigned to "other drug abuse."
[g] Includes community mental health centers, residential treatment facilities for the mentally ill, and partial-care facilities. Some providers treat persons with substance abuse problems.
[h] Includes methadone maintenance clinics and other facilities that primarily serve persons with substance abuse problems. Assumes that all services provided are primarily for treatment of substance abuse disorders.
[i] Includes facilities with units that offer specialized staff and treatment for substance abuse such as public health clinics, ambulatory treatment providers, health maintenance organization (HMO) centers, charitable organizations, correctional facility settings, and other entities. These organizations have substance abuse as a secondary mission. Assumes that all services provided are primarily for treatment of substance abuse disorders.

of clinically trained social workers and a 23 percent increase in the number of clinically trained psychologists.[7] Spending for psychiatrists grew at a lower rate than that for nonpsychiatrist physicians (7.3 percent versus 9.0 percent).

Use of psychotropic medications has been increasing over time, reflecting in part the increasing availability and application of new and older psychotropic medications. Estimates from the National Ambulatory Medical Care Survey (NAMCS) indicate that the number of visits during which a psychotropic medication was prescribed increased from 32.7 million in 1985 to 45.6 million in 1994.[8] Consistent with this trend, expenditures for retail medications for MH/SA grew by 9.6 percent annually between 1986 and 1996.

Nursing home expenditures for MH/SA treatment grew most slowly over the time period, less than 1 percent annually. Underlying this low growth is the fact that the proportion

of nursing home residents with mental illness dropped from 60 percent in 1985 to 27 percent in 1995, according to the 1985 and 1995 National Nursing Home Surveys. It is unclear whether the change in the mix of patients represented an actual change in the types of patients admitted or a change in how patients' diagnoses were defined and coded.

By payment source and diagnosis. Because of a complex mix of changes in the population structure, changes in reimbursement policies, and legislative and regulatory interventions, the percentage of MH/SA funding from public sources grew from approximately 49 percent in 1986 to approximately 54 percent in 1996 (Exhibit 4). Over this time period Medicaid, Medicare, and other federal programs grew to be a slightly more important source of funding for MH/SA treatment. These programs experienced the greatest average growth rates among the different payers (Exhibit 4).

Out-of-pocket spending had the lowest average growth rate per year—3.3 percent. The share of funds for MH/SA treatment coming from out-of-pocket sources decreased from 23 percent in 1986 to 16 percent in 1996. This is consistent with trends occurring in the overall health care system, which have been attributed to the spread of managed care. The share of funding from private insurance remained relatively constant, at 25–26 percent, suggesting that the decrease in out-of-pocket spending is not accompanied by comparable increases in private insurance coverage. The percentage of funding accounted for by other private sources and other state and local government grew at an average annual rate of 7.7 percent and 7.2 percent, respectively. Their shares of the total source of funding remained relatively constant over the eleven-year period.

The average annual growth rates by payer also show some interesting patterns by diagnosis (Exhibit 4). For example, spending by other federal programs on substance abuse treatment increased an average of 21.3 percent every year from 1986 to 1996, while for mental illness it grew by 3.6 percent. Growth rates for alcohol abuse were substantially lower than for other drug abuse in all of the payer catego-

EXHIBIT 4
Average Annual Growth Rate In Mental Health And Substance Abuse (MH/SA) Spending, By Source Of Payment And Diagnosis, 1986–1996

Source of payment	Mental health	Alcohol abuse[a]	Other drug abuse[b]	Total MH/SA
Total MH/SA spending	7.3%	1.7%	13.2%	7.2%
Private				
Client out-of-pocket	3.3	−3.9	11.6	3.3
Private insurance	8.7	0.5	10.1	8.0
Other private sources	7.6	3.9	13.4	7.7
Total private	6.3	−0.1	10.9	6.0
Public				
Medicare	9.2	6.5	13.7	9.2
Medicaid[c]	8.7	7.2	12.4	8.8
Other federal government[d]	3.6	14.0	21.3	9.4
Other state/local government	7.7	−2.4	13.2	7.2
Total public	8.2	3.2	14.6	8.3

SOURCE: Authors' analysis of national survey data (see Note 4 in text).
NOTE: Expenditures are limited to MH/SA treatment.
[a] Includes patients with primary alcohol problems (based on first listed diagnosis for general service sector and for specialty sector on provider classification as alcohol only).
[b] Includes patients with primary drug disorders and patients with combined drug and alcohol disorders (based on first listed diagnosis for general service sector and for specialty sector on provider classification of drug only or alcohol and drug).
[c] Includes both state and federal Medicaid expenditures.
[d] Includes Veterans Affairs, Department of Defense, and federal block grants.

ries. Part of this may reflect a shift in the pattern of substance use from alcohol only to comorbid alcohol and other drug abuse.

■ **MH/SA SPENDING AS A PERCENTAGE OF TOTAL HEALTH SPENDING.** Although the estimates presented thus far are generally consistent with the methodology used to create the NHA, they include spending for some providers that are excluded from the NHA. In particular, they include spending for some specialty providers that are classified by the Census Bureau as working in social service industries and are excluded from the NHA. In this section reported expenditures are limited to those included in the NHA.

HCFA estimated total personal health care spending in 1996 at $943 billion. If only MH/SA expenditures that fall into the NHA are counted, MH/SA spending is estimated at 8.1 percent of total personal health spending in 1996.

MH/SA spending in hospitals was about 7.4 percent of all hospital spending in 1996 (Exhibit 5). This includes spending in general hospital "scatter beds" as well as in general hospital specialty psychiatric units, psychiatric hospitals, and other specialty hospitals. MH/SA expenditures on physician services, including physician office visits, inpatient services delivered by independently billing physicians, and physician services in outpatient departments and emergency rooms, were about 5.5 percent of total U.S. health expenditures. MH/SA spending amounted to less than 1 percent of spending for home health care and 6.2 percent of spending in nursing homes. Treatment of MH/SA disorders accounted for 9.5 percent of personal health care expenditures for prescription drugs. We grouped together three NHA categories—other professionals, other personal health care, and government public health—to create a category comparable to our "other specialty providers" category. We found that MH/SA spending for this category accounted for 22.8 percent of personal health care expenditures.

Exhibit 6 describes MH/SA expenditures

EXHIBIT 5
Mental Health And Substance Abuse (MH/SA) Spending In Relation To National Health Spending, By Type Of Provider, Millions Of Dollars, 1996 And 1986–1996

	Millions of dollars, 1996			Average annual growth rate, 1986–1996	
Provider type	MH/SA	PHC	MH/SA as percent of PHC	MH/SA	PHC
Total spending	$76,312	$942,698	8.1%	7.2%	8.3%
Hospitals	26,485	358,546	7.4	5.8	7.1
Community hospitals	14,239	319,394	4.5	8.1	7.6
Other noncommunity hospitals	12,246	39,151	31.3	3.8	3.9
Physicians	11,098	202,057	5.5	8.4	8.1
Home health	297	30,192	1.0	26.6	16.8
Nursing homes	4,890	78,511	6.2	0.8	8.9
Retail prescription drugs	5,893	62,212	9.5	9.6	10.0
Other professionals, other personal health care, government public health	27,648	121,128	22.8	9.6	12.0
Other nondurable medical products	–[a]	29,230	–[a]	–[a]	–[a]
Durable medical products	–[a]	13,271	–[a]	–[a]	–[a]
Dental	–[a]	47,551	–[a]	–[a]	–[a]

SOURCE: Authors' analysis of national survey data (see Note 4 in text).
NOTE: PHC is personal health care expenditures. Total MH/SA expenditures differ from that reported in previous exhibits because not all expenditures are counted in the National Health Accounts. Expenditures are limited to MH/SA treatment.
[a] Not applicable.

EXHIBIT 6
Mental Health And Substance Abuse (MH/SA) Spending In Relation To National Health Spending, By Source Of Payment, Millions Of Dollars, 1996 And 1986–1996

	Millions of dollars, 1996			Average annual growth rate, 1986–1996	
Source of payment	MH/SA	PHC	MH/SA as percent of PHC	MH/SA	PHC
Total spending	$76,312	$942,698	8.1%	7.2%	8.3%
Private					
Client out-of-pocket	11,516	171,176	6.7	3.1	4.7
Private insurance	19,677	292,340	6.7	8.0	8.9
Other private sources	2,154	31,708	6.8	7.5	7.3
Total private	33,348	495,224	6.7	6.0	7.1
Public					
Medicare	10,655	197,827	5.4	9.2	10.2
Medicaid[a]	14,439	139,713	10.3	8.8	12.5
Other federal government	3,044	41,265	7.4	9.4	6.3
Other state/local government	14,826	68,668	21.6	7.2	7.3
Total public	42,964	447,473	9.6	8.3	9.9

SOURCE: Authors' analysis of national survey data (see note 4).
NOTE: PHC is personal health care expenditures. Total MH/SA expenditures differ from that reported in previous exhibits because not all expenditures are counted in the National Health Accounts. Expenditures are limited to MH/SA treatment.
[a] Includes both state and federal Medicaid expenditures.

as a percentage of the NHA and over time, by source of payment. The significance of MH/SA treatment to various payers varied from a low of only 5.4 percent of Medicare expenditures on personal health care to a high of 21.6 percent of state and local governments' spending.

■ TRENDS IN MH/SA EXPENDITURES VERSUS TOTAL HEALTH CARE. The growth of spending for the treatment of mental illness as well as substance abuse has been lower than the growth of health care spending generally. MH/SA spending increased by 7.2 percent annually between 1986 and 1996 (Exhibits 5 and 6). During the same period HCFA estimates that personal health care spending in total grew by 8.3 percent annually. This difference may indicate that national trends that are affecting much of the health care sector, such as the growth of managed care and the increasing capacity of health plans to negotiate discounts from providers, are having a proportionately greater impact on MH/SA services.[9]

For most provider categories, expenditure growth rates for MH/SA services were generally in line with expenditure growth rates for personal health care. The exception was for home health care, but here the difference still represents only a very small absolute dollar amount. In contrast to the concerns expressed in the media, particularly during the late 1980s, that private insurance costs for psychiatric disorders were skyrocketing, private insurance spending for MH/SA services actually grew more slowly than did spending for all personal health care (8.0 percent versus 8.9 percent) from 1986 through 1996.[10]

DISCUSSION

These results provide an opportunity to assess the aggregate monetary effects of complex changes in the MH/SA services system. Some of these effects may seem surprising—for example, that the annual rate of growth of MH/SA spending has been less than that for health care generally, lagging behind it by nearly one percentage point. One explanation

for this may be the greater sensitivity of MH/SA services to the cost containment methods associated with the spread of managed care over this period. Another may be the greater contribution that institutional care, particularly nursing homes, makes to total health care figures. Changes in these components affect overall growth rates more in general health care than in MH/SA care.

This study also finds that out-of-pocket spending as a percentage of total MH/SA spending has been falling. Although the same has been true for all personal health care, the growth rate of MH/SA out-of-pocket spending has been below that of total out-of-pocket spending. Shifts in spending distributions by payer reflect the outcome of changes in insured status, source of insurance, characteristics of benefits, and consumers' reactions to changes in their benefits. Private insurance coverage for MH/SA services has become less generous in recent years, primarily through the greater use of formal limits. On the other hand, a greater proportion of workers now have mental health coverage.[11]

The differences between out-of-pocket spending on MH/SA services and on other types of health care also may reflect the fact that, compared with general health care, demand for MH/SA services is more responsive to benefit changes. Persons may have reacted to increased limits on MH/SA insurance by lowering their demand for services rather than paying out-of-pocket. In addition, we find that spending for nonpsychiatrist physicians grew more rapidly than did spending for psychiatrists. This could partly reflect a shift in services and providers from those who are not covered to those who are. As an example, a client may substitute an antidepressant medication prescribed by a general practitioner for psychotherapy delivered by a psychologist.

A related finding is that out-of-pocket expenditures are a smaller proportion of total MH/SA expenditures than total out-of-pocket expenditures are of total personal health care expenditures. This finding is consistent with the evidence that public payers play a greater role in the MH/SA treatment system than in other types of health care.

In subsequent years we plan to update these estimates and refine our methodology. For example, we anticipate that Medical Expenditure Panel Survey (MEPS) data will be available for the next estimates and will provide additional information on out-of-pocket spending. In addition, because there have been significant advances in psychotropic drug treatment, we plan to expand our analysis of pharmaceutical spending. We hope that these efforts will not only allow us to track the impact of changes in the health care system on MH/SA spending, but increase the accuracy of our estimates as well.

This study was supported by the Office of Managed Care of the Centers for Substance Abuse Treatment and Mental Health Services at the Substance Abuse and Mental Health Services Administration (SAMHSA). The authors greatly appreciate the advice provided by Robert Anderson, Barry Brauth, Bill Cartwright, Mady Chalk, Michael Couty, Jon Gold, Howard Goldman, Kyle Grazier, Edwin Hustead, Katharine Levit, Ted Lutterman, Dennis McCarty, Roberta Ray, Dorothy Rice, Agnes Rupp, and Albert Woodward. In addition, Linda Graver and Jon Busch provided helpful editorial review. The full technical report describing these estimates in detail is available from SAMHSA.

NOTES

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2. R.G. Frank et al., "Paying for Mental Health and Substance Abuse Care," *Health Affairs* (Spring I 1994): 337–342.
3. The diagnosis codes included are *International Classification of Diseases*, Ninth Revision, Clinical Modification (ICD-9-CM) codes 291, 292, and 295 through 314 (excluding 305.1 for tobacco abuse), 648.3, 648.4, V40.2 V40.3, V40.9, V61, V66.3, V67.3, V70.1, V70.2, and V71.0. Omitted from the estimates were developmental mental delays (315), mild mental retardation (317), other retardation (319), and poisoning by psychotropic drugs (962 through 980), including alcohol toxicity.
4. For general service providers, we drew data from the following primary data sources: National Health Accounts (NHA) (1986–1996) to estimate national health care spending by provider and payer; National Hospital Discharge Survey (NHDS) (1986–1992 and 1994) to estimate the proportion of general hospital inpatient days devoted to MH/SA; National Hospital Ambulatory Medical Care Survey (NHAMCS) (1992–1995) to estimate the proportion of general hospital outpatient visits devoted to MH/SA; National Ambulatory Medical Care Survey (NAMCS) (1990–1996) to estimate the proportion of physician outpatient visits devoted to MH/SA; National Nursing Home Survey (1985 and 1995) to estimate the proportion of nursing home stays devoted to MH/SA; National Home and Hospice Care Survey (1992) to estimate the proportion of home health visits devoted to MH/SA; MarketScan® (1995) and Medicare claims (1990 and 1994) for the charge/payment ratio adjustment; Healthcare Cost and Utilization Project, National Inpatient Sample (HCUP-NIS) (1988–1994) to estimate the charge differential between MH/SA services and other services; and National Medical Expenditure Survey (NMES) to estimate the proportion of persons paying out-of-pocket.

   For example, to calculate mental health services spending in community hospitals, the following steps are taken: (1) Total expenditures for community hospital inpatient services by payer are extracted from the NHA. (2) Data on inpatient days from the NHDS are tabulated by diagnosis and expected primary payer. Differences between the primary payer and the actual distribution of payments are partially absorbed by the NHA distribution of expenditures across payers and partially absorbed by the payment differentials developed in step 4. (3) Data from the HCUP-NIS are tabulated to generate charges per day for the various diagnosis groups and expected primary payers. (4) MarketScan data on net and gross payments, Medicare data on benefit payments, and NMES data are used to develop payment differentials by diagnosis for various payers. These factors account for differences between charges and payments across diagnosis groups for a given payer. They also account for effects of differences in cost sharing across diagnosis groups for a given payer. (5) The three factors are multiplied together to establish a distribution of expenditures across diagnosis groups for each payer of community hospital care. These distributions are applied to the NHA estimate for total spending for community hospital inpatient services by the corresponding payer.
5. Detailed information on the cleaning and imputation process is described in a technical report available from SAMHSA's Center for Substance Abuse Treatment (CSAT).
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