

National Trends in Outpatient Psychotherapy

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Objective: The authors investigated recent trends in the use of outpatient psychotherapy in the United States.

Method: Service use data from two representative surveys of the U.S. general population, the 1998 (N=22,953) and 2007 (N=29,370) Medical Expenditure Panel Surveys, were analyzed, focusing on individuals who made more than one outpatient psychotherapy visit during that calendar year. The authors computed rates of any psychotherapy use; percentages of persons treated for mental health conditions with only psychotherapy, only psychotropic medication, or their combination; the mean number of psychotherapy visits of persons receiving psychotherapy; and psychotherapy expenditures.

Results: The percentage of persons using outpatient psychotherapy was 3.37% in 1998 and 3.18% in 2007 (adjusted odds ratio=0.95, 95% CI=0.82–1.09). Among individuals receiving outpatient mental health care, use of only psychotherapy (15.9% and 10.5% in 1998 and 2007, respectively; adjusted odds ratio=0.66, 95%

CI=0.48–0.90) as well as psychotherapy and psychotropic medication together (40.0% and 32.1%; adjusted odds ratio=0.73, 95% CI=0.59–0.90) declined while use of only psychotropic medication increased (44.1% and 57.4%; adjusted odds ratio=1.63, 95% CI=1.32–2.00). Declines occurred in annual psychotherapy visits per psychotherapy patient (mean values, 9.7 and 7.9; adjusted β =-1.53, $p<0.0001$), mean expenditure per psychotherapy visit (\$122.80 and \$94.59; β =28.21, $p<0.0001$), and total national psychotherapy expenditures (\$10.94 and \$7.17 billion; $z=2.61$, $p=0.009$).

Conclusions: During the decade from 1998 to 2007, the percentage of the general population who used psychotherapy remained stable. Over the same period, however, psychotherapy assumed a less prominent role in outpatient mental health care as a large and increasing proportion of mental health outpatients received psychotropic medication without psychotherapy.

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Psychotherapy has traditionally been regarded as a central feature of mental health service in the United States. It is widely viewed as a core clinical activity of psychiatrists, psychologists, social workers, and other mental health care professionals (1). Some evidence suggests that the role of psychotherapy in community treatment has diminished in recent years. According to the National Ambulatory Medical Care Survey, visits to office-based psychiatrists that include psychotherapy declined from 44.4% in 1996–1997 to 28.9% in 2004–2005 (2). Although the survey includes clinical diagnoses reported by the treating physicians, it offers no information about psychotherapy delivered by other mental health specialists and no person-level data on psychotherapy use. As measured by the Medical Expenditure Panel Survey (MEPS), the percentage of Americans treated with antidepressants who also received psychotherapy decreased from 31.5% in 1996 to 19.9% in 2005 (3). There has also been a decrease in employer-sponsored health plans that cover outpatient

psychotherapy (4). Over this period, however, Americans have become more comfortable talking with health care professionals about personal problems (5), and concerns about antidepressant-associated suicidality may have led more depressed adults to pursue psychotherapy (6).

There is a paucity of information about recent national trends in use of psychotherapy in the United States. The most recent national profile of psychotherapy use indicated that in 1997 approximately 3.6% of Americans received at least one psychotherapy visit and most of those who received psychotherapy (61%) were also treated with a psychotropic medication (7). The scarcity of data on basic patterns in psychotherapy use contrasts with a relative abundance of information on patterns of psychotropic medication use (8, 9).

In this study, we investigated recent national trends in the use of outpatient psychotherapy. We examined changes in who receives, provides, and pays for outpatient psychotherapy in the United States between 1998 and 2007.

This article is featured in this month's AJP **Audio**, is the subject of a **CME** course (p. 1561), and is discussed in an editorial by Dr. Druss (p. 1419)

We also considered trends in the outpatient treatment of mental disorders with psychotherapy alone, psychotropic medication but not psychotherapy, and a combination of psychotherapy and psychotropic medication.

Method

Data were drawn from the household component of the 1998 and the 2007 MEPS, which are subsamples of the National Health Interview Survey (NHIS) (10, 11). Both surveys were sponsored by the Agency for Healthcare Research and Quality to provide national estimates of the use of, expenditures on, and financing of health care services. These surveys were conducted as national probability samples of the U.S. noninstitutionalized civilian population and were designed to provide nationally representative estimates to be compared over time. All data elements in these analyses except the physician provider specialty variable were the same in the two surveys.

Samples

A total of 22,953 participants provided data for the entire 1998 survey year from two separate overlapping panels, each of which included three rounds of interviews. The full-year response rate was 67.9% after factoring in the effects of nonresponse to NHIS, nonresponse to the first round of MEPS, and survey attrition from both panels (10). A total of 29,730 participants provided data for the entire 2007 survey, the most recent available data, for a full-year response rate of 56.9% (11). For both surveys, a designated informant was queried about all related persons who lived in the household.

The Agency for Healthcare Research and Quality devised weights to adjust for the complex survey designs and yield unbiased national estimates. The sampling weights also adjust for non-response and poststratification to population totals based on U.S. census data. More detailed discussions of the design, sampling, and adjustment methods have been presented elsewhere (10, 11).

Structure of the Survey

The MEPS included a series of three in-person interviews during each study year. Respondents were asked to record medical events, as they occurred, in a calendar/diary that was reviewed in-person during each interview. Written permission was obtained from selected survey participants to contact the medical providers they mentioned during the survey to verify service use, charges, and sources and amounts of payments.

Mental health conditions. The MEPS collected information on the diagnosis for each visit to hospital outpatient departments and office-based outpatient care. This information was coded in a manner that permitted classification according to ICD-9 categories by professional coders. The diagnoses associated with the psychotherapy visits were then grouped into the following mental health condition categories: schizophrenia and related disorders (codes 295, 297–299), depression and related mood disorders (codes 296.2, 296.3, 298.0, 300.4, 309.1, 311), anxiety disorders (codes 293.84, 300.0, 300.2, 300.3, 3008.3, 309.81), childhood disorders and mental retardation (codes 299, 312–315, 317–319, 307 [except 307.2 and 307.8]), adjustment disorders (codes 308 [except 308.3], 309.0, 309.1, 309.2, 309.4, 309.9), other mental disorders (codes 290–319 not specified above), and subsyndromal mental health-related conditions, including psychosocial circumstances (codes V40, V61, V62), sleep disturbance (780.5), malaise and fatigue (780.7), and nervousness (799.2). Separate variables classified emergency department visits and inpatient admissions with a diagnosis of a mental disorder (ICD-9-CM codes 290–319).

Psychotherapy. The MEPS asked respondents what type of care was provided during each outpatient visit and whether it was from a mental health specialist or other health care provider,

using a set of response categories that included “mental health counseling or psychotherapy.” Mental health counseling or psychotherapy is defined as “a treatment technique for certain forms of mental disorders relying principally on talk/conversation between the mental health professional and the patient.” It specifically includes “individual, family, and/or group therapies” (12). Visits for psychotherapy or mental health counseling are considered psychotherapy visits.

Psychotropic medications. The MEPS surveys asked respondents about medications bought or otherwise obtained by survey participants during the survey year. Psychotropic medications were grouped by therapeutic class as antidepressants, antipsychotic medications, anxiolytics/hypnotics, stimulants, and mood stabilizers (the latter included lithium, lamotrigine, carbamazepine, and valproate or valproic acid for respondents who were not treated for seizure disorders [ICD-9-CM code 345]).

Providers. The MEPS solicited information on the type of health care professionals providing treatment at each visit. We classified mental health providers of psychotherapy into three groups: social workers, psychologists, and psychiatrists. Information was not available in 1998 concerning psychotherapy visits provided by psychiatrists. A psychotherapy user was considered to have been treated by a given provider type if the user reported making one or more visits to that type during the survey year.

Expenditures and source of payment. The MEPS data include sources of expenditures for each health care service. “Expenditures” refers to what is paid for the medical service and is defined as the sum of payments for each medical service that was obtained, including out-of-pocket payments and payments made by private insurance, Medicaid, Medicare, and other sources (10, 11). From these data, total expenditures were aggregated into outpatient medical care (outpatient visits and medications for all conditions), outpatient mental health care (outpatient visits and medications for mental health conditions), and outpatient psychotherapy. Summary variables were also constructed for six payment sources, including self-payment, private insurance, Medicaid, Medicare, other federal programs, and a residual group of other sources.

Analysis Plan

For each survey year, the percentage of persons using psychotherapy was computed overall and stratified by several sociodemographic characteristics. Trends were then examined by mental health condition group in the estimated national number of treated outpatients and their distribution with respect to treatment with psychotherapy but not psychotropic medication, psychotherapy and psychotropic medication, and psychotropic medication alone. The distributions of psychotherapy users were then examined by use of psychotropic medications, mental health provider groups, acute mental health service use, number of psychotherapy visits during the year, and self-assessed mental health status (excellent, very good, or good versus fair or poor). Among psychotherapy users, the mean number of psychotherapy visits in each survey year was compared overall and for psychotherapy users with and without psychotropic medication use as well as for those with good to excellent as compared with fair or poor self-rated mental health. In separate analyses, total national expenditures were estimated for all outpatient medical care, outpatient mental health care (outpatient visits for a mental disorder or condition), and psychotherapy. National psychotherapy expenditures were partitioned by payment source for the two survey years. The U.S. Consumer Price Index for medical care was used to adjust 1998 expenditures to 2007 dollars.

All statistical analyses were conducted using SAS, version 9.2 (SAS Institute, Cary, N.C.), using SURVEY procedures to accommodate the complex sample design and the weighting of observations. A series of logistic regressions, adjusted for age, sex, race/ethnicity,

TABLE 1. Percentage of Individuals Using Outpatient Psychotherapy, by Sociodemographic Characteristics, per 1998 and 2007 Medical Expenditure Panel Surveys

Characteristic (Ns for 1998 and 2007) ^a	1998		2007		Analysis	
	%	95% CI	%	95% CI	Adjusted Odds Ratio ^b	95% CI
Total (N=22,953, N=29,370)	3.37	3.03–3.71	3.18	2.88–3.47	0.95	0.82–1.09
Sex						
Male (N=10,859, N=14,003)	2.84	2.42–3.26	2.69	2.35–3.02	0.95	0.78–1.16
Female (N=12,094, N=15,367)	3.87	3.36–4.38	3.65	3.26–4.05	0.95	0.79–1.13
Age (years)						
0–17 (N=6,947, N=8,543)	2.95	2.41–3.50	2.72	2.27–3.17	0.92	0.72–1.19
18–34 (N=5,039, N=6,190)	3.11	2.47–3.74	3.19	2.63–3.76	1.05	0.79–1.39
35–54 (N=6,297, N=7,911)	4.97	4.29–5.65	4.02	3.47–4.57	0.78	0.64–0.96
≥55 (N=4,438, N=6,368)	2.07	1.56–2.57	2.75	2.24–3.25	1.35	0.98–1.86
Race/ethnicity						
White ^c (N=13,938, N=16,758)	3.83	3.41–4.26	3.52	3.16–3.90	0.91	0.78–1.07
Hispanic (N= 5,585, N=7,659)	1.93	1.36–2.49	2.06	1.58–2.54	1.09	0.74–1.59
African American (N=3,430, N=4,953)	1.92	1.41–2.42	2.51	1.95–3.06	1.30	0.91–1.86
Marital status ^d						
Married (N=8,801, N=11,331)	2.80	2.37–3.23	2.77	2.39–3.15	1.03	0.83–1.28
Separated, divorced, or widowed (N=3,323, N=4,077)	5.30	4.32–6.29	4.30	3.56–5.03	0.86	0.64–1.14
Not married (N=2,698, N=3,835)	4.41	3.51–5.31	4.30	3.53–5.08	0.95	0.71–1.27
Education (years) ^d						
0–11 (N=3,813, N=4,379)	2.47	1.90–3.05	2.59	1.99–3.20	1.11	0.79–1.58
12 (N=4,892, N=5,924)	3.24	2.66–3.82	2.74	2.26–3.23	0.81	0.62–1.06
13–16 (N=4,851, N=6,991)	4.56	3.85–5.26	3.72	3.17–4.28	0.81	0.65–1.02
≥17 (N=1,092, N=1,768)	4.38	2.92–5.84	5.41	4.09–6.74	1.29	0.83–1.99
Health insurance						
Private (N=14,713, N=16,751)	3.21	2.81–3.60	3.16	2.81–3.52	1.01	0.85–1.19
Public (N= 4,847, N=8,028)	5.29	4.53–6.04	4.17	3.56–4.79	0.80	0.64–0.99
None (N=3,393, N=4,591)	1.80	1.25–2.35	1.79	1.27–2.32	1.02	0.65–1.60
Employment status ^e						
Employed (N=9,633, N=12,477)	3.50	3.02–3.97	2.99	2.60–3.38	0.88	0.73–1.08
Unemployed (N=2,550, N=3,411)	7.42	6.21–8.64	6.82	5.82–7.81	0.94	0.74–1.19

^a Missing observations include age (1998, N=232; 2007, N=358), marital status (1998, N=466; 2007, N=612), education (1998, N=640; 2007, N=793), and employment status (1998, N=425; 2007, N=560).

^b Adjusted for age, sex, race/ethnicity, and health insurance coverage.

^c Includes white, American Indian, Alaska native, and Asian or Pacific Islander.

^d Limited to respondents age 21 and older.

^e Limited to respondents ages 21–64.

and insurance status, were performed to assess the strength of associations between year (with 1998 as the reference year) and psychotherapy use; results are presented as adjusted odds ratios with 95% confidence intervals. Similar analyses were conducted with psychotherapy and psychotropic medication use as well as psychotropic medication use only as dependent variables. Linear regression was used to assess change in the number of psychotherapy visits per year among respondents reporting psychotherapy use, and z tests were used to evaluate changes in total national expenditures. All tests were two-sided, and alpha was set at 0.05.

Results

Percentage of Persons Using Psychotherapy

The overall percentage of persons using psychotherapy was 3.37% in 1998 and 3.18% in 2007 (Table 1). A significant decrease in the percentage of persons using psychotherapy occurred among adults in the 35- to 54-year age group and among publicly insured persons (Table 1). There was a trend toward increasing use of psychotherapy by adults

age 55 and over, although this association did not reach statistical significance in the adjusted model. In both years, a comparatively high percentage of unemployed persons, publicly insured individuals, and adults with at least 17 years of formal education used psychotherapy.

Psychotherapy Use and Psychotropic Medication

The estimated number of Americans receiving outpatient mental health treatment increased from approximately 16.1 million in 1998 to 23.3 million in 2007 (Table 2). Significant increases occurred in the number of persons treated for depressive disorders, which were the most common conditions, as well as anxiety disorders, childhood-onset mental disorders, bipolar disorder, and mental health-related conditions.

There were significant declines in the percentages of mental health outpatients who were treated with psychotherapy alone and of those treated with a combination of psychotherapy and psychotropic medication. Psychotherapy-only

TABLE 2. U.S. National Trends in the Estimated Number and Percentage of Patients Treated With Psychotherapy, Psychotropic Medication, and Their Combination, by Treated Mental Health Condition Group, 1998 and 2007^a

Treated Mental Health Condition (Ns for 1998 and 2007 MEPS)	1998 (Estimated N or %)	2007 (Estimated N or %)	Analysis	
			z or Adjusted Odds Ratio ^b	p or 95% CI
Any mental health condition (N=1,407, N=2,203)	16,110,790	23,268,345	z=6.86	p<0.0001
Psychotherapy only (%)	15.9	10.5	0.66	0.48–0.90
Psychotherapy and medication (%)	40.0	32.1	0.73	0.59–0.90
Medication only (%)	44.1	57.4	1.63	1.32–2.00
Depressive disorders (N=560, N=860)	6,616,640	8,839,124	z=4.03	p<0.0001
Psychotherapy only (%)	8.5	6.3	0.59	0.48–1.27
Psychotherapy and medication (%)	50.5	42.5	0.78	0.59–1.03
Medication only (%)	41.0	51.2	1.39	1.04–1.86
Bipolar disorders (N=64, N=143)	706,423	1,504,390	z=4.10	p<0.0001
Psychotherapy only (%)	0	1.4	—	
Psychotherapy and medication (%)	88.6	67.5	0.26	0.09–0.77
Medication only (%)	11.4	31.1	3.54	1.21–10.40
Anxiety disorders (N=220, N=557)	2,608,363	6,027,100	z=8.24	p<0.0001
Psychotherapy only (%)	19.5	9.1	0.41	0.22–0.79
Psychotherapy and medication (%)	42.2	35.4	0.78	0.50–1.21
Medication only (%)	38.3	55.5	1.96	1.23–3.11
Adjustment disorders (N=120, N=157)	1,512,068	1,670,049	z=0.65	p=0.52
Psychotherapy only (%)	26.5	30.7	1.45	0.66–3.19
Psychotherapy and medication (%)	27.9	18.7	0.70	0.34–1.44
Medication only (%)	45.6	50.6	0.99	0.50–1.95
Schizophrenia disorders (N=47, N=77)	515,957	714,597	z=1.48	p=0.13
Psychotherapy only (%)	8.4	5.7	0.46	0.09–2.28
Psychotherapy and medication (%)	75.4	68.7	0.76	0.26–2.22
Medication only (%)	16.2	25.6	1.81	0.54–6.11
Childhood-onset disorders (N=243, N=362)	2,575,672	3,628,568	z=3.08	p=0.002
Psychotherapy only (%)	13.1	8.5	0.52	0.24–1.11
Psychotherapy and medication (%)	40.7	33.4	0.72	0.45–1.14
Medication only (%)	46.2	58.1	1.76	1.11–2.78
Other mental disorders (N=95, N=118)	1,097,806	1,258,266	z=0.82	p=0.21
Psychotherapy only (%)	20.2	10.6	0.39	0.13–1.23
Psychotherapy and medication (%)	39.9	38.7	1.01	0.45–2.28
Medication only (%)	39.9	50.7	1.60	0.68–3.76
Mental health-related conditions (N=330, N=514)	3,441,420	5,374,918	z=4.74	p<0.0001
Psychotherapy only (%)	24.2	8.8	0.36	0.17–0.77
Psychotherapy and medication (%)	25.3	20.3	0.78	0.47–1.27
Medication only (%)	50.5	70.9	2.14	1.37–3.34

^a Data based on the 1998 and 2007 Medical Expenditure Panel Surveys (MEPS).

^b Adjusted for age, sex, race/ethnicity, and insurance.

treatment significantly declined for anxiety disorders and mental health-related conditions, and combination treatment significantly declined for bipolar disorders.

Across all mental health outpatients, there was a significant increase in the percentage who received psychotropic medication without psychotherapy. This trend was significant among patients treated for depressive, bipolar, anxiety, and childhood-onset disorders as well as mental health-related conditions (Table 2). Among patients treated for depressive disorders with psychotropic medication, a great majority in 1998 (92.1%) and 2007 (91.9%) received antidepressants (data not shown).

Psychotherapy and Other Mental Health Services

Most outpatients who received psychotherapy also received psychotropic medication (Table 3). In both years,

antidepressants were the most commonly used class of psychotropic medication, followed by anxiolytics/hypnotics. There was a significant increase in the proportion of psychotherapy patients who reported using antipsychotic medications and stimulants.

Little change occurred in the proportion of psychotherapy users who received psychotherapy from psychologists or social workers (Table 3). The percentage of psychotherapy patients who received inpatient mental health care significantly declined, and the proportion who received emergency mental health care increased, although this trend fell below the level of statistical significance (Table 3).

In both years, roughly one-third of psychotherapy patients made only one or two visits, and approximately one in 10 made more than 20 visits. Among those

TABLE 3. Mental Health Services of Persons Receiving Psychotherapy, per 1998 and 2007 Medical Expenditure Panel Surveys

Mental Health Service	1998 (N=770)		2007 (N=878)		Analysis	
	%		%		Adjusted Odds Ratio ^a	95% CI
Psychotropic medications						
Any	61.6		67.5		1.28	0.95–1.71
Antidepressants	46.2		50.5		1.18	0.91–1.54
Anxiolytics/hypnotics	21.9		21.9		0.95	0.68–1.31
Antipsychotics	13.2		19.1		1.68	1.16–2.44
Mood stabilizers	10.2		10.3		1.09	0.74–1.61
Stimulants	8.6		13.8		2.02	1.33–3.08
Mental health professionals						
Psychiatrists	N/A		52.5			
Psychologists	39.2		38.1		1.03	0.78–1.36
Social workers	13.4		13.9		1.13	0.75–1.70
Acute mental health services						
Inpatient	5.6		2.7		0.47	0.25–0.86
Emergency	1.7		2.8		1.72	0.82–3.63
Number of psychotherapy visits						
1–2	33.0		38.4		1.22	0.94–1.57
3–10	39.2		41.5		1.11	0.87–1.42
11–20	16.3		11.2		0.66	0.48–0.91
>20	11.5		9.0		0.78	0.52–1.18
Mental health status						
Good to excellent	50.0		52.8		0.94	0.86–1.03
Fair or poor	50.0		47.2		0.80	0.62–1.05
	Mean	SEM	Mean	SEM	Adjusted β^a	p
Psychotherapy visits						
Total	9.67	0.59	7.92	0.61	–1.53	<0.0001
Patients receiving medication	10.98	0.78	8.62	0.85	–1.91	<0.0001
Patients not receiving medication	7.57	0.67	6.46	0.51	–1.28	0.0003
Patients with fair or poor mental health status	10.33	0.66	9.28	1.04	–0.60	0.0070
Patients with good to excellent mental health status	9.04	1.05	6.70	1.05	–2.27	<0.0001

^a Adjusted for age, sex, race/ethnicity, and insurance.

receiving psychotherapy, there was a significant decline in the mean number of psychotherapy visits. This decline was especially pronounced for psychotherapy patients who were treated with psychotropic medication and for those who reported good to excellent mental health (Table 3).

Psychotherapy Expenditures

Between 1998 and 2007, a marked increase occurred in estimated national outpatient medical care expenditures, from \$361.46 billion to \$592.41 billion. Aggregate expenditures for outpatient mental health care were little changed, although psychotherapy expenditures significantly declined (Table 4). As a proportion of outpatient mental health expenditures, psychotherapy expenditures decreased from 71.0% (1998) to 44.7% (2008). Declines occurred in psychotherapy expenditures by private insurance and the residual group of other payment sources. Mean expenditures for a psychotherapy visit declined from \$122.80 in 1998 to \$94.59 in 2007 ($\beta=28.21$, $p<0.0001$), a 23.0% decrease (data not shown). Among the major payers, the decline in mean expenditures for psychotherapy visits was 27.1% for private insurance, 17.4% for self-payment, and 17.3% for Medicaid. Mean Medicare expendi-

tures for psychotherapy visits increased 3.2% between 1998 and 2007 (data not shown).

Discussion

When viewed from the perspective of the general population, the rate and pattern of psychotherapy use remained quite stable between 1998 and 2007. When considered within the context of U.S. outpatient mental health care, however, an increase in pharmacotherapy led to a decrease in the portion of mental health care devoted to psychotherapy. We discuss these trends in psychotherapy use from both perspectives.

During the study period, overall rates of psychotherapy were little changed. Extending back over a 20-year period, the percentage of Americans who use psychotherapy each year has remained remarkably stable: 3.24% in 1987 (13), 3.37% in 1998, and 3.19% in 2007. The previously reported decrease in number of psychotherapy visits in office-based psychiatric practices (2) is likely a consequence of fewer psychotherapy visits per treatment episode. Stability is also evident in the general sociodemographic pattern and characteristics of psychotherapy patients. Higher rates of use have been consistently reported by females than

TABLE 4. U.S. National Trends in Total Estimated Expenditures and Sources of Payment for Outpatient Medical Care, Outpatient Mental Health Care, and Psychotherapy, 1998 and 2007^a

Payment Source	Annual Expenditures		Analysis	
	1998 (\$ Billions)	2007 (\$ Billions)	z	p
Outpatient medical care	361.46	592.41	12.00	<0.001
Mental health care	15.40	16.03	0.33	0.73
Psychotherapy	10.94	7.17	2.61	0.009
Self-payment	2.73	1.92	1.35	0.18
Private insurance	4.71	2.92	1.80	0.07
Medicare	0.59	0.52	0.38	0.78
Medicaid	1.69	1.18	1.39	0.16
Other public sources	0.81	0.51	0.88	0.38
Other	0.41	0.12	1.78	0.07

^a Data based on the 1998 and 2007 Medical Expenditure Panel Surveys. 1998 expenditures have been inflated by the Consumer Price Index for medical care between 1998 and 2007.

males, middle-aged adults than children or older adults, unmarried than married persons, and unemployed than employed individuals (7, 14). Practitioner surveys further reveal consistency in the format of psychotherapy, with a predominance of individual over group or family psychotherapy and a strong predominance of eclectic/integrative and psychodynamic approaches (13).

National rates and general patterns of psychotherapy use have remained remarkably consistent despite important changes in the private and public financing of mental health care (15, 16). Beginning on January 1, 1998, the federal Mental Health Parity Act prohibited employer-based group health plans with more than 50 workers from having different annual lifetime benefit limits for mental health and general medical illnesses (17). Alongside federal and state legislative reforms aimed at increasing access to mental health services (18), there has been rapid growth in specialty mental health care organizations that manage behavioral health care services. It has been estimated that the number of Americans who receive their coverage of mental health services through managed behavioral health organizations increased from 53 million in 1994 to 170 million in 2007 (15). This rise of managed care, rather than a shift to less costly psychotherapists, such as social workers and psychologists, may have led to the decline in average expenditures per psychotherapy visit during the study period (19). Yet despite these and other changes in insurance arrangements and in the organization of payment and delivery of mental health services, the segment of the public that consumed psychotherapy in 1998 closely resembles the segment that did so in 2007.

The distribution of mental health outpatients across treatment modalities has shifted in recent years toward medication-only regimens and away from psychotherapy alone and combined treatment regimens. Little is known about the most clinically efficacious and cost-efficient allocation of patients across these treatment modalities. For some conditions, such as major depression, there is evidence that psychotherapy in combination with antidepressant medication is associated with greater improvement than medication alone (20, 21). Recent research

has also questioned the superiority of antidepressants over placebo for patients with less severe depression (22). However, third-party coverage of antidepressants and other psychotropic medications is typically generous (23), while significant limits exist on coverage of psychotherapy services (4). Although the present findings raise the possibility that psychotherapy is underutilized in some clinical contexts, an assessment of the quality of care is not possible without additional information. A greater understanding of the comparative effectiveness of psychotherapy, psychotropic medications, and their combination and the clinical conditions under which each treatment modality can be reasonably expected to yield comparative advantages is critical to the development of rational mental health care policy.

Several factors may have contributed to the shifting distribution of treatment modalities. First, although the pharmaceutical industry spends billions of dollars each year promoting medications to physicians and the general public (24), there is no entity of comparable influence or visibility to advocate psychotherapy. Second, while the U.S. Food and Drug Administration (FDA) works to ensure the safety and efficacy of medications, no federal agency or prominent national organization certifies the effectiveness of individual psychotherapies or psychotherapists (25). Third, reliable information about medications is far more readily available to the public than is information about psychotherapy. Fourth, ideological disagreements among psychotherapists who favor scientific evidence-based techniques (1, 26) and those drawn to theoretically driven approaches (27) may have the effect of limiting public acceptance of psychotherapy. Fifth, while primary care physicians account for a great majority of psychotropic medication prescriptions in the United States (28), psychotherapy typically requires treatment from a mental health specialist, which for many Americans continues to carry significant stigma (29). Sixth, for some practitioners, especially psychiatrists (30), there are financial disincentives to providing psychotherapy. This may also be true for health care professionals who rely heavily on private insurance reimbursements for psychotherapy, which de-

clined substantially during the study period. Finally, unlike pharmacotherapy, psychotherapy requires a considerable time commitment from patients.

Between 1998 and 2007, there was little overall change in the medication treatment profile of psychotherapy patients. However, significant increases did occur in use of antipsychotic medications and stimulants. Previous research suggests that antipsychotic use has increased in the treatment of children and adolescents, older adults, and patients with mood disorders (9, 31). Stimulant use may have expanded as a consequence of increased clinical and public interest in adult attention deficit hyperactivity disorder (ADHD) (32) after FDA approval of several stimulants for adult ADHD during the study period.

During the study period, the average annual number of psychotherapy visits declined by nearly 20%, from 9.7 to 7.9 visits. In mixed samples of predominantly depressive and anxiety disorders, roughly one-half of patients improve after 13 to 18 visits (33). Even in carefully controlled and implemented clinical trials, only one-half to two-thirds of patients respond after an average of 12 psychotherapy visits (33). Without independent assessments, however, it is not possible from the MEPS data to determine the quality or effectiveness of the psychotherapy treatment episodes.

The surveys have several limitations. The MEPS surveys collect data from household informants who may not be aware of all of the services used by household members. Recall problems and stigma may contribute to an underestimation of psychotherapy and psychotropic medication use in both surveys. Without measures of psychiatric symptoms, it is also not possible to assess the validity of the reported reasons for the psychotherapy visits. Several important groups, including homeless individuals, nursing home residents, inmates in correctional facilities, and individuals in other institutional settings, are not represented in the surveys. Incomplete response to the surveys, especially in 2007, opens the results to the possibility of selection bias. However, separate weighting adjustments were performed to reduce survey estimate bias associated with nonresponse among sampled households and with attrition at the person level across survey rounds, and evaluations provide no evidence of nonresponse bias (34). Because the 1998 survey did not classify providers by physician specialty, we are unable to examine trends in psychotherapy provided by psychiatrists. Finally, the survey definition of psychotherapy is quite broad, spanning supportive counseling to psychoanalytically oriented psychotherapy, and the mix and content of applied psychological treatments may have changed considerably during the study period.

Against a background of increasing pharmacological treatments, use of psychotherapy has remained nearly constant. Despite impressive progress by academic researchers in demonstrating the efficacy of several specific forms of psychotherapy for some of the most common

psychiatric disorders (35–41), a decreasing proportion of mental health outpatients receive psychotherapy, and those who do are receiving fewer visits. Over the course of a decade that witnessed substantial growth in outpatient medical expenditures, spending on outpatient mental health care underwent little change, and spending on psychotherapy significantly declined. During the same period, a large and growing number of mental health outpatients received psychotropic medications without psychotherapy. These changes have helped to redefine outpatient mental health care in America.

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