ORIGINAL ARTICLE

National Trends in Psychotherapy by Office-Based Psychiatrists

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Context: In addition to prescribing medications, providing psychotherapy has long been a defining characteristic of the practice of clinical psychiatry. However, there are indications that the role of psychiatrists in providing psychotherapy may have diminished in recent years.

Objective: To examine recent national trends in the provision of psychotherapy by office-based psychiatrists.

Design: Data from the 1996 through 2005 cross-sectional National Ambulatory Medical Care Survey were analyzed to examine trends in psychotherapy provision within nationally representative samples of visits to office-based psychiatrists. Multivariate analyses examined the time trend, adjusting for patient, visit, and setting characteristics. Practice-level analyses examined time trends in the percentage of psychiatrists who provided psychotherapy to all, some, or none of their patients during a typical week.

Setting: Office-based psychiatry practices in the United States.

Participants: Patients with psychiatric diagnoses visiting outpatient psychiatrists.

Main Outcome Measure: Provision of psychotherapy in visits longer than 30 minutes.

Results: Psychotherapy was provided in 5597 of 14 108 visits (34.0% [weighted]) sampled during a 10-year period. The percentage of visits involving psychotherapy declined from 44.4% in 1996-1997 to 28.9% in 2004-2005 ($P < .001$). This decline coincided with changes in reimbursement, increases in managed care, and growth in the prescription of medications. At the practice level, the decrease in providing psychotherapy corresponded with a decline in the number of psychiatrists who provided psychotherapy to all of their patients from 19.1% in 1996-1997 to 10.8% in 2004-2005 ($P = .001$). Psychiatrists who provided psychotherapy to all of their patients relied more extensively on self-pay patients, had fewer managed-care visits, and prescribed medications in fewer of their visits compared with psychiatrists who provided psychotherapy less often.

Conclusions: There has been a recent significant decline in the provision of psychotherapy by psychiatrists in the United States. This trend is attributable to a decrease in the number of psychiatrists specializing in psychotherapy and a corresponding increase in those specializing in pharmacotherapy—changes that were likely motivated by financial incentives and growth in psychopharmacological treatments in recent years.

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PSYCHOTHERAPY HAS BEEN A DEfining characteristic of practice of psychiatry for several generations of psychiatrists. Psychotherapy also has been widely viewed as a core area of competency in psychiatric training. For example, the psychiatric residency requirements of the Accreditation Council for Graduate Medical Education emphasize that clinical training should include experiences in short- and long-term individual psychotherapy.[1] Various forms of psychotherapy are also recommended by professional practice guidelines either alone or in combination with medications for treatment of several psychiatric disorders, including major depressive disorder,[2] acute stress disorder and post-traumatic stress disorder,[3] bipolar disorder,[4] panic disorder,[5] obsessive-compulsive disorder,[6] substance use disorders,[7] eating disorders,[8] and borderline personality disorder.[9] Yet, despite the traditional prominence of psychotherapy in psychiatric practice and training, there are indications of a recent decline in the provision of psychotherapy by US psychiatrists—a trend attributed to reimbursement policies favoring brief medication management visits rather than psychotherapy and the introduction of newer psychotropic medications with fewer adverse effects.[10,11]

Two studies by Olfson et al[12,13] published in 1999 and 2002 specifically examined the provision of psychotherapy from the mid-1980s through the mid-1990s. The

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1999 study,[12] based on the National Ambulatory Medical Care Survey (NAMCS), reported a decrease in the rate of psychotherapy provision by psychiatrists between 1985 and 1995. The 2002 study,[13] based on data from the 1987 National Medical Expenditure Survey and the 1997 Medical Expenditure Panel Survey, examined trends in the provision of outpatient psychotherapy by medical and nonmedical mental health care providers. That study did not find a decline in the provision of psychotherapy and, in fact, recorded an increase in the rate of psychotherapy provided by medical providers. However, the proportion of patients who received more than 20 psychotherapy visits declined. That study did not distinguish between psychiatrists and other physicians.[13]

Since the period covered by those studies, there have been significant changes in the patterns of outpatient mental health treatment in the United States.[14,15] Continued expansion of managed care, introduction of the Federal Mental Health Parity Act of 1996,[16] and accelerating growth in marketing and use of newer psychotropic medications may have altered the provision of psychotherapy since the mid-1990s. These developments, as well as the continuing debates about the place of psychotherapy in contemporary psychiatric practice and training, provide an impetus for the continued monitoring of national trends in the provision of psychotherapy by psychiatrists.[11,17-19]

In this article, we follow trends in the provision of psychotherapy by psychiatrists from the mid-1990s through the mid-2000s. We use data from 10 consecutive years of the NAMCS (1996-2005) to survey visits by office-based psychiatrists. We examine overall trends in the provision of psychotherapy by office-based psychiatrists as well as trends within specific sociodemographic and clinical subgroups. Next, we assess correlates of providing psychotherapy and evaluate the effects of these factors on time trends in psychotherapy provision. Finally, we aggregate visits over practices according to provision of psychotherapy and examine time trends and characteristics of these practices.

METHODS

SAMPLE

The NAMCS is a multistage probability survey of visits to office-based physicians.[20,21] The survey response rate varied from 70.0% in 1996 to 61.5% in 2005. A systematic random sample of visits to each physician was drawn during a randomly selected 1-week period.

ASSESSMENTS

For each visit, the physician or a member of the physician's staff provided information about the characteristics of the patient, the length of the visit, the reason for the visit, clinical diagnoses, and tests and procedures performed or ordered. Analyses presented herein are limited to visits during which the patient saw a psychiatrist.

Diagnosis was recorded based on *International Classification of Diseases, Ninth Revision, Clinical Modification* codes. As many as 3 diagnoses were recorded for each visit. In this report we limited our analyses to visits with a psychiatric diagnosis (codes 290-319). These diagnoses constituted 96.3% of all visits to psychiatrists during the study period. Specific diagnoses examined separately included major depression (296.2 and 296.3), dysthymia (300.4), bipolar disorder (296.0-296.1 and 296.4-296.8), other affective disorders (296.9 and 311.0), generalized anxiety disorder (300.02), panic disorder with or without agoraphobia (300.01 and 300.21), obsessive-compulsive disorder (300.3), posttraumatic stress disorder (309.81), social phobia (300.23), schizophrenia (295), and personality disorders (301).

Primary source of payment was classified as private insurance, Medicaid, Medicare, self-pay, and "other types." Assessment of source of payment changed between 1996 and subsequent years. Therefore, the analyses of source payment were limited to years 1997 through 2005. Managed care status was ascertained differently in various years of the NAMCS. In 1996, the NAMCS categorized "HMO [health maintenance organization]/other prepaid" along with other expected types of payment for a visit. From 1997 through 2000, the NAMCS included 3 questions asking whether the patient belonged to an HMO, whether authorization was required for care, and whether the visit was capitated. For these analyses, a positive response to any of these questions or a rating of "HMO/other prepaid" for type of payment in the 1996 NAMCS was considered to be an indication of a managed care visit. No questions regarding managed care arrangements were included in the NAMCS from 2001 through 2005. Therefore, the analyses for managed care status of the visits were limited to NAMCS results from 1996 through 2000.

Provision of psychotherapy was ascertained by asking whether psychotherapy was prescribed or provided during the visit. The NAMCS defines psychotherapy as: "All treatments involving the intentional use of verbal techniques to explore or alter the patient's emotional life in order to effect symptom reduction or behavior change."[22] We further refined the definition by limiting psychotherapy visits to those longer than 30 minutes. Length of visit was recorded in minutes for all NAMCS visits and included only the time that the physician spent in face-to-face contact with the patient. A study comparing NAMCS ratings with direct observation found that the ratings had high specificity.[23] However, NAMCS ratings appeared to somewhat overestimate the time spent with patients.[23] Partly to account for this tendency in recording visit duration, we repeated the analyses with psychotherapy sessions lasting 45 minutes or longer. Those results were quite similar to results reported in this article (data not shown).

Prescription of medications was ascertained by asking whether any medications were prescribed during the visit. The number of past visits was ascertained in the NAMCS from 2001 to 2005 and classified as 0, 1 to 2, 3 to 5, and 6 or more visits. No information on the number of past visits was available for years 1996 through 2000.

Other variables used in the multivariate analyses included patient's age, sex, race/ethnicity (white, black, Hispanic, or other), office setting (freestanding private solo practice, freestanding private group practice, HMO, or other setting), region of the country (Northeast, South, West, or Southwest), and location (metropolitan vs nonmetropolitan). Data on office setting were not included in the 1996 survey.

ANALYTIC APPROACH

Analyses were conducted in 3 stages. The first 2 stages involved visit-level analyses and the third stage, practice-level analyses. In the first stage, time trends in provision of psychotherapy in psychiatry visits were examined for the total sample of psychiatric visits and in subgroups of visits based on patients' sociodemographic, clinical, and practice characteristics. Bivariate logistic regression models were used in these stratified analyses to assess time trends in providing psychotherapy for different patient subgroups. Variations across trends were examined using interaction terms with survey year. A statistically significant in-

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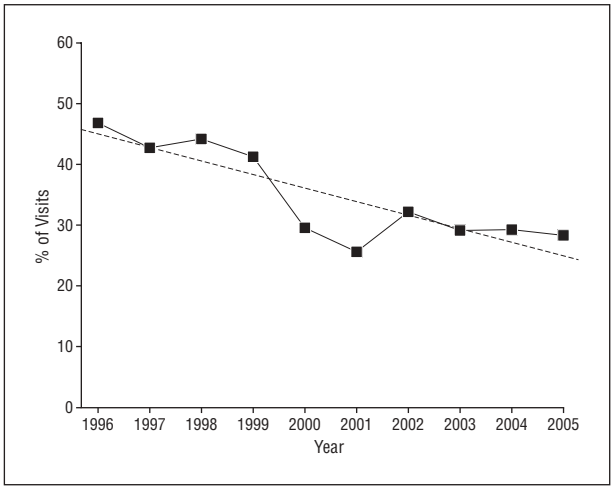

Figure 1. Percentage of psychiatry visits in which psychotherapy was provided per year (data from the National Ambulatory Medical Care Survey).

teraction term indicates that trends across different subgroups were different at a statistically significant level.

In the second stage, correlates of providing psychotherapy were examined in the total sample of NAMCS visits to psychiatrists using bivariate and multivariate logistic regression models. Multivariate analyses adjusted for the effect of potentially mediating or confounding variables. Further multivariate analyses examined the contribution of each variable separately to the association of survey year with provision of psychotherapy. For these analyses, each variable was entered into a binary logistic model one at a time along with the variable of survey year to predict the provision of psychotherapy. At each step, the adjusted odds ratio (AOR) associated with the variable of survey year, its confidence interval (CI), and the associated statistical test were examined as was the magnitude of any change in the odds ratio (OR) compared with the bivariate model including only the variable of survey year.

Further visit-level analyses examined and compared the number of past visits from 2001 through 2005. An ordinal logistic regression model was used for this analysis in which the variable of number of past visits (0, 1-2, 3-5, or ≥6) was the ordinal dependent variable and survey year was the independent variable.

Variations in the provision of psychotherapy by psychiatrists across survey years can be either owing to a smaller proportion of visits to each psychiatrist in which psychotherapy is provided, a smaller number of psychiatrists providing psychotherapy, or a combination of these factors. These possibilities were assessed in the third stage of the analyses—the practice-level analyses. These analyses were conducted by aggregating visits across psychiatrists' practices and examining trends in the proportion of visits in each practice in which psychotherapy was provided. Furthermore, we examined time trends in the percentage of practices in which psychotherapy was provided during no, some, or all visits and compared these practices with regard to patient, visit, and setting characteristics.

Visit-level analyses adjusted for visit weights, clustering, and stratification of data using design elements provided by the NAMCS investigators. When adjusted for these design elements, NAMCS data are representative of annual visits to office-based physicians in the United States. All percentages based on visit-level analyses are weighted.

RESULTS

The NAMCS from 1996 through 2005 sampled 246 609 visits to physicians' offices in which the patients actually saw physicians. Of these, 14 108 were visits to psychiatrists and included a psychiatric diagnosis. Psychotherapy was provided during 5597 (34.0% [weighted]) visits to psychiatrists across the 10-year study period. Compared with earlier years, office visits in later years were less likely to include psychotherapy (**Figure 1** and **Table 1**). Specifically, the percentage of visits involving psychotherapy declined from 44.4% in 1996-1997 to 28.9% in 2004-2005.

STRATIFIED ANALYSES

In stratified analyses, significant declines in the proportion of visits involving psychotherapy occurred for all sociodemographic groups, except among patients 65 years or older and patients of a race/ethnicity other than non-Hispanic white (Table 1). The interaction term of racial/ethnic group with survey year was statistically significant in logistic regression analysis (Wald statistic $F_{3,579}=3.40$, $P=.02$), suggesting significant differences in trends.

In stratified analyses, the downward trend was also significant in visits by patients with all mood disorders except for bipolar disorder, in visits for the treatment of generalized anxiety disorder, and in visits by patients with private insurance. The trend approached a significant level ($P=.06$) for visits paid for by Medicare (Table 1). A downward time trend was also noted among visits with and without medications prescribed, solo practices and HMOs, practices in the Northeast region, and practices in metropolitan areas. The trend approached a significant level ($P=.06$) in nonmetropolitan areas (Table 1).

Despite these variations across subgroups, it is noteworthy that most ORs for time trend were smaller than 1, indicating a broad and more or less uniform downward trend in psychotherapy provision across time. Furthermore, except for the racial/ethnic group, none of the other interaction terms with the variable of survey year were statistically significant.

CORRELATES OF PROVISION OF PSYCHOTHERAPY

There were significant variations in receipt of psychotherapy by patient and visit characteristics and treatment setting (**Table 2**). In bivariate analyses, visits by black or Hispanic patients were less likely to involve psychotherapy than visits by white patients, as were visits by patients diagnosed as having major depression, bipolar disorder, panic disorder, or schizophrenia compared with other diagnoses; visits paid for by Medicaid compared with private insurance; managed care visits; visits in which medications were prescribed; visits to group practices, HMOs, or other settings compared with solo practices; visits in the Midwest or South compared with the Northeast; and visits in nonmetropolitan areas compared with metropolitan areas (Table 2). In contrast, visits by adults in the 3 older age groups were more likely than those made by the youngest age group to involve psychotherapy, as were visits with diagnoses of dysthymia, obsessive-compulsive disorder, or personality disorders and self-pay visits compared with visits paid for by private insurance (Table 2).

In the multivariate analysis, the association of age; diagnoses of dysthymia, obsessive-compulsive disorder, schizophrenia, and personality disorders; source of pay-

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Table 1. Percentage of Office-Based Psychiatric Visits That Involved Psychotherapy[a]

	No. of Visits		% of Visits Involving Psychotherapy[b]		Bivariate Logistic Regression Analyses[c]	
	1996-1997	2004-2005	1996-1997	2004-2005	OR (95% CI)	*P* Value
Total	2634	3389	44.4	28.9	0.91 (0.86-0.96)	<.001
Patient Characteristics						
Age, y						
<25	378	807	40.5	26.3	0.92 (0.85-0.99)	.03
25-44	1071	996	43.5	27.9	0.91 (0.86-0.97)	.002
45-64	900	1280	48.3	30.8	0.90 (0.85-0.96)	.001
≥65	285	306	40.1	30.3	0.94 (0.87-1.03)	.21
Sex						
Male	1084	1443	43.6	31.7	0.93 (0.88-0.98)	.01
Female	1550	1946	45.1	26.9	0.90 (0.85-0.95)	<.001
Race/ethnicity						
White	2285	2868	48.2	29.9	0.90 (0.85-0.94)	<.001
Black	143	210	32.1	17.3	0.92 (0.82-1.03)	.14
Hispanic	180	241	20.1	24.2	1.02 (0.91-1.14)	.77
Other	26	70	18.3	38.6	1.08 (0.93-1.24)	.31
Visit Characteristics						
Psychiatric Diagnosis[d]						
Major depression	701	943	37.0	24.1	0.92 (0.87-0.98)	.01
Dysthymia	365	298	64.6	46.2	0.90 (0.83-0.98)	.01
Bipolar disorder	241	527	30.7	23.5	0.94 (0.87-1.02)	.12
Other mood disorder	331	421	47.3	30.6	0.92 (0.84-1.00)	.04
Generalized anxiety disorder	93	169	45.0	24.8	0.85 (0.74-0.98)	.03
Panic disorder	150	196	35.6	25.2	0.91 (0.83-1.00)	.06
Posttraumatic stress disorder	69	129	45.0	34.1	0.96 (0.85-1.07)	.44
Social phobia	12	20	29.0	29.3	0.94 (0.76-1.17)	.60
Obsessive-compulsive disorder	89	145	50.3	52.0	0.99 (0.89-1.11)	.88
Schizophrenia	174	219	9.6	14.3	1.01 (0.89-1.14)	.89
Personality disorders	237	223	67.7	63.7	0.95 (0.86-1.05)	.34
Source of payment[e,f]						
Private insurance	677	1576	44.9	25.0	0.91 (0.85-0.97)	.005
Medicare	187	368	32.2	21.1	0.90 (0.81-1.00)	.06
Medicaid	108	398	22.1	13.0	0.91 (0.76-1.10)	.33
Self-pay	362	691	55.4	59.4	0.97 (0.88-1.06)	.51
Other	68	281	28.7	28.2	1.04 (0.92-1.18)	.55
Managed care visit[g]						
Yes	611	. . .	36.0	. . .	0.87 (0.68-1.10)	.25
No	2023	. . .	47.3	. . .	0.87 (0.74-1.01)	.08
Medication						
Prescribed	1808	2841	34.4	24.3	0.93 (0.88-0.99)	.01
Not prescribed	826	548	72.9	61.0	0.90 (0.84-0.97)	.006
Setting and Location						
Office setting[e]						
Freestanding, solo practice	984	2060	56.1	38.2	0.91 (0.85-0.98)	.01
Freestanding, group practice	279	830	15.6	16.1	0.95 (0.84-1.07)	.37
HMO	21	40	23.1	4.6	0.72 (0.54-0.95)	.02
Other	126	459	17.9	17.6	1.01 (0.84-1.23)	.89
Region						
Northeast	807	924	67.1	46.4	0.87 (0.80-0.95)	.002
Midwest	458	684	43.8	24.2	0.94 (0.81-1.08)	.37
South	830	971	26.7	23.0	0.95 (0.86-1.05)	.30
West	539	810	39.2	27.4	0.95 (0.87-1.03)	.23
Location						
Metropolitan	2482	3088	45.5	30.0	0.92 (0.87-0.97)	.002
Nonmetropolitan	152	301	25.3	19.0	0.81 (0.65-1.01)	.07

Abbreviations: CI, confidence interval; ellipses, not applicable; HMO, health maintenance organization; OR, odds ratio.
[a] Data are from the National Ambulatory Medical Care Survey (NAMCS).
[b] Percentages are weighted by NAMCS sampling weights.
[c] Logistic regression analyses are based on the total sample of subjects for all 10 years, except for the analyses for managed care, which are based on data for 5 years (1996 through 2000). Analyses for "Source of payment" and "Office setting" were based on data from survey years 1997 to 2005.
[d] Each visit could carry up to 3 diagnoses. Therefore, the total number with each diagnosis adds up to more than the total number of visits.
[e] Data were not available for the 1996 survey.
[e] N=3314 for 2004-2005 owing to missing data.
[g] Data on managed care status of visits were missing for years 2001 through 2005.

ment; prescription of medications; office setting; and region persisted. However, the association of survey year with provision of psychotherapy was no longer statistically significant (Table 2). Managed care status was not included in multivariate analyses because these data were only available for years 1996 through 2000.

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Table 2. Regression Analyses for Predictors of Psychotherapy in Psychiatrist Visits[a]

Variable	Bivariate Logistic Regression Analysis		Multivariate Logistic Regression Analysis	
	OR (95% CI)	*P* Value	AOR (95% CI)	*P* Value
Survey year	0.91 (0.86-0.96)	<.001	0.96 (0.91-1.02)	.16
Patient Characteristics				
Age, y				
<25	1 [Reference]	. . .	1 [Reference]	. . .
25-44	1.46 (1.19-1.79)	<.001	1.28 (1.00-1.65)	.05
45-64	1.61 (1.30-2.01)	<.001	1.46 (1.19-1.90)	.005
≥65	1.39 (1.03-1.87)	.031	1.62 (1.13-2.33)	.008
Male sex	1.04 (0.93-1.16)	0.501	1.10 (0.97-1.24)	.13
Race/ethnicity				
White	1 [Reference]	. . .	1 [Reference]	. . .
Black	0.54 (0.39-0.73)	<.001	1.05 (0.75-1.46)	.78
Hispanic	0.56 (0.40-0.80)	.001	0.76 (0.48-1.21)	.25
Other	0.92 (0.57-1.50)	.741	1.34 (0.84-2.14)	.21
Visit Characteristics				
Psychiatric diagnosis				
Major depression	0.80 (0.68-0.96)	.01	0.90 (0.73-1.10)	.30
Dysthymia	2.46 (1.96-3.09)	<.001	1.78 (1.37-2.30)	<.001
Bipolar disorder	0.67 (0.55-0.82)	<.001	0.88 (0.68-1.15)	.34
Other mood disorder	0.93 (0.74-1.16)	.52	0.91 (0.69-1.19)	.48
Generalized anxiety disorder	0.86 (0.59-1.25)	.53	0.89 (0.62-1.27)	.51
Panic disorder	0.75 (0.59-0.94)	.02	0.78 (0.60-1.01)	.06
Posttraumatic stress disorder	1.15 (0.81-1.63)	.44	1.33 (0.81-2.19)	.26
Social phobia	1.13 (0.67-1.93)	.64	1.11 (0.55-2.23)	.77
Obsessive-compulsive disorder	1.43 (1.04-1.98)	.03	1.47 (0.95-2.29)	.09
Schizophrenia	0.33 (0.23-0.46)	<.001	0.61 (0.42-0.89)	.01
Personality disorders	3.09 (2.39-3.99)	<.001	2.52 (1.96-3.25)	<.001
Source of payment				
Private insurance	1 [Reference]	. . .	1 [Reference]	. . .
Medicare	0.82 (0.64-1.06)	.13	0.82 (0.63-1.08)	.17
Medicaid	0.37 (0.24-0.57)	<.001	0.53 (0.34-0.84)	.007
Self-pay	3.04 (2.33-3.97)	<.001	2.10 (1.59-2.78)	<.001
Other	0.82 (0.56-1.20)	.31	0.78 (0.49-1.26)	.31
Managed care visit[b]	0.62 (0.47-0.82)	.001	. . .	. . .
Any medication prescribed	0.25 (0.19-0.32)	<.001	0.37 (0.29-0.46)	<.001
Setting and Location				
Office setting				
Freestanding, solo practice	1 [Reference]	. . .	1 [Reference]	. . .
Freestanding, group practice	0.30 (0.20-0.45)	<.001	0.41 (0.27-0.61)	<.001
HMO	0.20 (0.09-0.49)	<.001	0.20 (0.09-0.44)	<.001
Other	0.23 (0.14-0.39)	<0.001	0.44 (0.25-0.77)	.004
Region				
Northeast	1 [Reference]		1 [Reference]	. . .
Midwest	0.44 (0.26-0.73)	.001	0.70 (0.40-1.20)	.19
South	0.37 (0.24-0.56)	<.001	0.55 (0.35-0.87)	.01
West	0.71 (0.46-1.09)	.11	0.94 (0.59-1.49)	.80
Nonmetropolitan area	0.51 (0.28-0.94)	.03	0.63 (0.35-1.14)	.13

Abbreviations: AOR, adjusted odds ratio; CI, confidence interval; ellipses, not applicable; HMO, health maintenance organization; OR, odds ratio.
[a] Data are from the National Ambulatory Medical Care Survey.
[b] Data on managed care status of visits were missing for years 2001 through 2005. The variable of managed care visits was excluded from the multivariate analyses because these data were not collected in years 2001 through 2005.

When the variables of source of payment and prescription of medications were individually introduced into a bivariate model examining the association of survey year with provision of psychotherapy, the ORs associated with survey year changed more than with any other variables (AOR, 0.93; 95% CI, 0.88-0.99; $P=.02$ and AOR, 0.93; 95% CI, 0.88-0.98; $P=.004$, respectively). When both source of payment and medication prescription were added to the model, the association of survey year with psychotherapy provision was reduced to trend-level significance (AOR, 0.94; 95% CI, 0.86-1.00; $P=.05$). These data suggest that changes in payment source and prescription of medications largely mediated the decrease over time in psychotherapy provision.

NUMBER OF PAST VISITS

The number of past visits involving psychotherapy did not change significantly from 2001 through 2005 (OR, 0.95; 95% CI, 0.82-1.10; $P=.46$). More than three-fourths of psychiatric visits were by patients who had at least 6 previous visits to the same psychiatrist (80.2% in 2001 and 76.2% in 2005).

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PRACTICE-LEVEL ANALYSES

Patient visits were clustered within 756 practices (median number of visits in each practice, 19). In practice-level analyses, we also observed a declining time trend in the mean proportion of visits to each practice in which psychotherapy was provided (linear regression coefficient = –0.015; SE, 0.005; t_{755} = 3.14; P = .002).

Examining the distribution of practices with regard to provision of psychotherapy revealed that in a typical week 215 of 756 practices (28.4%) did not provide psychotherapy during any visits and 92 (12.2%) provided psychotherapy during all visits (**Figure 2**). In 449 practices (59.4%), psychotherapy was provided in some but not all of the sampled visits. After excluding the 2 groups of practices in which psychotherapy was provided in all or none of the visits, the association of time with psychotherapy was reduced in magnitude and the association was no longer statistically significant (linear regression coefficient = –0.004; SE, 0.005; t_{448} = 0.88; P = .38).

Further analyses revealed a significant decrease over time in the percentage of practices in which all sampled visits involved psychotherapy from 19.1% (1995-1996) to 10.8% (2004-2005) (OR, 0.88; 95% CI, 0.81-0.95; P = .001) and a statistically trend-level increase in the percentage of practices in which no patients received psychotherapy from 24.5% (1996-1997) to 29.2% (2004-2005) (OR, 1.06; 95% CI, 1.00-1.11; P = .05).

There were significant differences among practices with regard to patient, visit, and setting characteristics (**Table 3**). Specifically, practices in which all sampled visits involved psychotherapy had a disproportionately higher percentage of visits by patients who were aged 25 to 64 years, white, diagnosed as having dysthymia or personality disorders, and paid for visits themselves (self-pay). These practices were also more likely to be solo practices and in the Northeast region (Table 3). In contrast, practices in which none of the sampled visits involved psychotherapy had a higher percentage of visits by patients who were younger than 25 years, black, and diagnosed as having bipolar disorder, other mood disorders, or schizophrenia (Table 3). These practices had a higher percentage of Medicaid and managed care visits and visits involving prescription of medications and were more likely to be in the South and in settings other than solo practices (Table 3).

When these practice characteristics were entered into a binary logistic model for distinguishing offices where all vs none of the sampled visits involved psychotherapy (excluding the middle group of practices in which some patients received psychotherapy), the model successfully classified 86.0% of practices, suggesting that differences in practice styles between these 2 groups of psychiatrists were strongly associated with differences in characteristics of patients, modes of reimbursement, and setting.

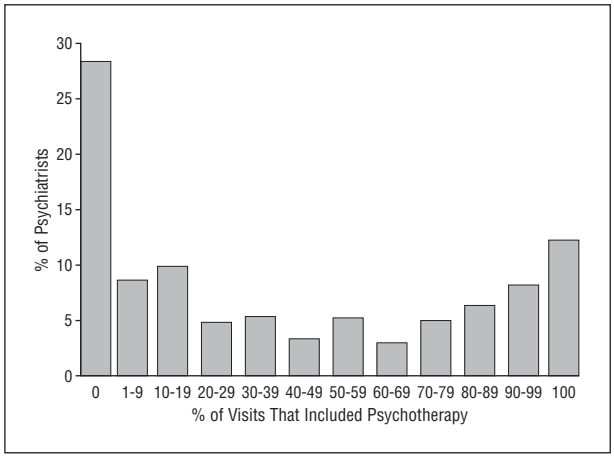

Figure 2. Psychiatrists' practices by percentage of visits in which psychotherapy was provided (data from the National Ambulatory Medical Care Survey).

COMMENT

The findings from this study should be viewed in the context of several limitations. First, we used a somewhat restrictive definition of psychotherapy that might have misclassified some visits. Psychotherapy visits were required to be longer than 30 minutes and to be explicitly designated as a psychotherapy visit by the psychiatrist or office staff. Some visits likely involved use of psychotherapeutic techniques but were not classified as psychotherapy in the current analysis. Psychotherapeutic techniques can be effectively taught and used in brief medication management visits by psychiatrists and other health care providers.[24,25] Future research might examine the extent to which brief visits by psychiatrists include such well-defined elements of psychotherapy.[26] We also note that because psychotherapy sessions traditionally last between 45 and 60 minutes,[27] inclusion of visits that are from 30 to 44 minutes long may capture some visits that do not meet more rigorous standards of psychotherapy. However, when we repeated the analyses for sessions lasting 45 minutes or longer, the results were quite similar to those reported here (data not shown). Second, because the NAMCS samples visits rather than patients, some patient duplication may have occurred during the 1-week sampling frame. Third, NAMCS did not assess the type of psychotherapy, and the number of past therapy visits was only available from 2001 through 2005. Without more detailed information, it is not possible to fully examine time trends in the type, intensity, and duration of psychotherapy treatment episodes. Examining the types of psychotherapy would be of special interest as there has been an expansion in the use of more structured short-term therapies in recent years—a development encouraged by financial factors as well as changing preferences of consumers.[28] Fourth, the NAMCS does not indicate the percentage of patients who receive psychotherapy from nonphysician mental health care professionals. A previous study found an increase in the provision of psychotherapy by some, but not all, nonmedical providers from the mid-1980s through the mid-1990s.[13] The examination of these trends needs to be extended to more recent times. Fifth, we classified practices based on the provision of psychotherapy in a typical 1-week period. A longer time frame might have yielded different results. Furthermore, the actual proportion of practices in which all or none of the visits involved psychotherapy may be lower than our estimates, despite the

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Table 3. Characteristics of Psychiatrists Who Provided Psychotherapy in All, Some, or None of Their Visits[a]

Variable	Psychotherapy Provision Group: All Visits (n=92)	Some Visits (n=449)	No Visits (n=215)	Test	*P* Value[b]
Patient Characteristics					
Age, y					
<25	11.9	21.1	25.8	$F_{2,753}$=8.71	<.001
25-44	39.4	34.1	32.4	$F_{2,753}$=4.08	.02
45-64	38.9	35.4	32.5	$F_{2,753}$=3.23	.04
≥65	9.9	9.4	9.3	$F_{2,753}$=0.06	.94
Male sex	42.6	43.7	44.0	$F_{2,753}$=0.16	.85
Race/ethnicity					
White	93.3	85.1	82.8	$F_{2,753}$=9.02	<.001
Black	2.1	6.8	8.6	$F_{2,753}$=7.41	<.001
Hispanic	3.5	5.6	5.7	$F_{2,753}$=1.01	.36
Other	1.1	2.6	2.9	$F_{2,753}$=1.84	.16
Visit Characteristics					
Psychiatric diagnosis					
Major depression	22.1	26.1	26.3	$F_{2,753}$=1.26	.28
Dysthymia	21.3	10.9	5.1	$F_{2,753}$=37.96	<.001
Bipolar disorder	7.2	12.0	13.7	$F_{2,753}$=7.42	<.001
Other mood disorder	9.2	12.9	15.7	$F_{2,753}$=4.48	.01
Generalized anxiety disorder	4.9	4.6	3.9	$F_{2,753}$=0.50	.61
Panic disorder	4.1	5.6	5.9	$F_{2,753}$=1.44	.24
Posttraumatic stress disorder	4.3	3.9	3.2	$F_{2,753}$=0.68	.51
Social phobia	1.5	0.8	0.6	$F_{2,753}$=1.18	.31
Obsessive-compulsive disorder	4.0	4.0	2.7	$F_{2,753}$=2.51	.08
Schizophrenia	1.4	5.9	9.3	$F_{2,753}$=12.63	<.001
Personality disorders	8.9	6.5	3.7	$F_{2,753}$=6.76	.001
Source of payment					
Private insurance	38.6	46.0	47.9	$F_{2,674}$=2.18	.11
Medicare	8.8	11.6	13.2	$F_{2,674}$=1.99	.14
Medicaid	4.9	9.9	17.8	$F_{2,674}$=11.47	<.001
Self-pay	44.9	25.1	11.3	$F_{2,674}$=35.74	<.001
Other	2.7	7.4	9.8	$F_{2,674}$=5.43	.005
Managed care visit[c]	19.4	31.3	35.6	$F_{2,342}$=5.04	.007
Any medication prescribed	58.0	78.9	84.6	$F_{2,753}$=29.66	<.001
Setting and Location					
Office setting					
Free-standing, solo practice	88.0	65.5	39.6	χ^2_2=64.09	<.001
Free-standing, group practice	6.7	21.3	27.4	χ^2_2=13.90	.001
HMO	0	1.2	1.0	χ^2_2=0.93	.63
Other	5.3	12.0	32.0	χ^2_2=45.79	<.001
Region					
Northeast	43.5	30.1	20.9	χ^2_2=16.38	<.001
Midwest	14.3	20.3	21.9	χ^2_2=2.47	.29
South	15.2	25.6	37.2	χ^2_2=17.86	<.001
West	27.2	24.1	20.0	χ^2_2=2.23	.33
Nonmetropolitan area	5.4	8.5	12.6	χ^2_2=4.73	.09

Abbreviation: HMO, health maintenance organization.
[a] Data are from the National Ambulatory Medical Care Survey.
[b] Continuous variables (eg, percentage of male patients in each practice and percentage in each age group) were compared by analysis of variance and the *F* test. Categorical variables (eg, office type, location) were compared by contingency table analysis and the χ^2 test.
[c] Data on managed care status of visits were missing for years 2001 through 2005.

appreciable number of sampled visits per practice (median, 19 visits). Finally, the clinical and public health significance of changes in psychotherapy provision should be judged on the basis of changes in outcome of illness and the patients' quality of life and functioning—variables not measured by the NAMCS.

Within the context of these limitations, NAMCS data provide a broad picture of recent national trends in the provision of psychotherapy by US psychiatrists. Between 1996 and 2005, there was a significant and substantial decrease in psychotherapy by office-based psychiatrists, extending a trend noted between 1985 and 1995.[12] Whereas 44.4% of visits to psychiatrists in 1996-1997 involved psychotherapy, only 28.9% of visits in 2004-2005 involved psychotherapy. These trends highlight a gradual but important change in the content of outpatient psychiatric care in the United States and a continued shift toward medicalization of psychiatric practice. Much of this change can be explained by shifts in financing of outpatient mental health care and increasing prescription of medications. The magnitude of financial disincentives for provision of psychotherapy was high-

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lighted by a Practice Research Network study that documented that third-party reimbursement for one 45- to 50-minute outpatient psychotherapy session is 40.9% less than reimbursement for three 15-minute medication management visits.[28] The role of financial considerations is further underscored by the past research indicating that patients who pay out of pocket are most likely to receive psychotherapy, followed by patients with private insurance; whereas, patients with public insurance are least likely to receive psychotherapy.[29] Consistent with these findings, our study found a strong positive association between self-pay visits and psychotherapy delivery.

Visits provided under managed care tended not to include psychotherapy. In line with this trend, an earlier report based on the 1985 and 1995 NAMCS found a significant decline in the duration of psychiatric visits covered by managed care arrangements.[12] These findings echo views voiced by the American Psychiatric Association's Commission on Psychotherapy by Psychiatrists[17] and have even led some experts to call psychotherapy by psychiatrists in managed care settings an "oxymoron."[17]

In recent years, there has been an increase in the prescription of psychotropic medications.[30-32] This broad trend may reflect the availability of newer medications with fewer adverse effects and increasing demand for these medications fostered by aggressive pharmaceutical campaigns,[33] increased public awareness of common mental disorders,[34] and greater public receptivity toward mental health treatments.[35] Our study found an inverse association between prescribing medications and providing psychotherapy by psychiatrists. Besides financial incentives for medication management in place of psychotherapy noted earlier, this finding could reflect differences in the clinical orientation of the treating psychiatrists, differences in patient diagnoses, or differences in patient preferences for these treatments.[36] Interestingly, the inverse association of prescribing medications and providing psychotherapy persisted even after controlling for diagnosis in the multivariate analysis.

Office-based psychiatrists tend to cluster into 3 somewhat distinct groups with regard to providing psychotherapy. The largest group comprised more than 59% of psychiatrists who provided psychotherapy for some, but not all, of their patients. However, more than 40% of psychiatrists either provided psychotherapy to all their patients or to none of them. This distribution in use of psychotherapy might either reflect an ideological divide in contemporary psychiatry between psychotherapeutic and biological camps[37] or a cultural difference between the diminishing group of solo-practice psychiatrists, clustered in the Northeast region of the country, who provide treatment for a select self-paying patient population of patients who have less severe disorders and a growing group of psychiatrists working in group-practice or other nonsolo settings providing care for a more heterogeneous patient population who have more severe disorders and who are covered by private or public insurance.

The time trends for these groups of psychiatrists may reflect the cohort effects and shifting cultures in residency training programs during the past decades. In some programs, influential role models in academic psychiatry have turned away from providing psychotherapy, partly because of financial disincentives built into contemporary academic practice pay plans. Furthermore, many psychotherapeutically oriented psychiatrists serve as volunteer rather than core faculty members. With replacement of the older generation of the psychotherapeutically oriented psychiatrist teachers by the younger generation of teachers and mentors whose training emphasized pharmacotherapy, the newer cohorts of psychiatric trainees may be less motivated to use psychotherapy in their practices. These shifts in training, values, and role expectations of new generations of psychiatrists may have contributed to the time trends in the use of both psychotherapy and psychotropic medications. If these trends continue in the coming years, the ranks of psychotherapeutically oriented psychiatrists will continue to diminish, and office-based psychiatry will become increasingly dominated by psychiatrists who specialized in pharmacotherapy.

As noted earlier, the effects of these trends on the course and outcome of psychiatric illnesses treated by these psychiatrists remain unclear. At present, there is little empirical evidence that psychotherapy provided by psychiatrists is sufficiently more effective than that provided by other mental health professionals to justify its higher cost. Without such evidence, it will be hard to convince third-party payers to assume the higher costs of psychotherapy delivered by psychiatrists. However, there is some evidence that, compared with the split-care model in which psychiatrists only prescribe medications and psychotherapy is provided by nonmedical professionals, the integrated care model in which the psychiatrist provides both medication and psychotherapy may not be more expensive and may even reduce costs.[18,38]

The findings may have implications for training of future generations of psychiatrists as well. The time trends noted in this and other studies[12,13] highlight rapid changes in the practice of clinical psychiatry in the managed care era, changes that call for different clinical and administrative competencies and skill sets.[39,40] The traditional model of psychiatric training with its emphasis on competency in delivering formal psychotherapy[41] may become less relevant to future generations of psychiatrists who operate in managed care settings in which short-term medication visits are the norm and formal psychotherapy is delegated to nonmedical professionals. Although most psychiatrists continue to provide psychotherapy for some patients, underscoring the enduring place of psychotherapy in the contemporary practice of psychiatry, even within this group significant variation exists in the proportion of visits involving psychotherapy. These practice-style variations are perhaps attributable to variations in psychotherapy training[42] and in attitudes toward this form of treatment.

These variations and the time trends for providing psychotherapy by psychiatrists may also have implications for the identity of psychiatry as a profession. Some psychiatrists view the ability to provide psychotherapy along with medication treatment as a core aspect of the practice of psychiatry.[19] However, we found that psychiatrists who strongly favor psychotherapy tend to prescribe medications for only slightly more than half of their patients, and a growing group of psychiatrists who prescribe medications for the large majority of patients appear to shun delivery of formal psychotherapy alto-

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gether. A key challenge facing the future generation of psychiatrists will likely involve maintaining their professional role as integrators of the biological and psychosocial perspectives while working within the constraints of the strong market forces of third-party payers and managed care to implement advances in the diagnosis and treatment of mental disorders.

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