National Trends in the Outpatient Treatment of Anxiety Disorders

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Background: Recent advances in psychotherapy and pharmacotherapy have increased the number of treatment options for anxiety disorders. This article examines changes in outpatient treatment of anxiety disorders in the United States between 1987 and 1999.

Method: Analyses are presented of service utilization data from 2 nationally representative surveys of the general population: the 1987 National Medical Expenditure Survey and the 1999 Medical Expenditure Panel Survey. Respondents were selected who made 1 or more outpatient visits for the treatment of an anxiety disorder (ICD-9/DSM-IV: 300.0, 300.2, 300.3, or 308.3). The rates of treatment, psychotropic medication use, psychotherapy, number of outpatient treatment visits, type of provider, and source of payment were determined.

Results: The rate of outpatient treatment for anxiety disorders increased from 0.43 per 100 persons in 1987 to 0.83 in 1999 (p < .001). Among those treated for an anxiety disorder, the proportion that received psychotropic medications increased from 52.1% to 69.9% (p = .008). Among treated patients, antidepressant use increased from 18.3% to 44.9% (p < .0001), while use of benzodiazepines (42.3% to 31.7%, p = .09) and psychotherapy (60.5% to 48.0%, p = .07) tended to decline. A decreasing proportion of mean treatment expenditures was covered by self-payment (53.2% to 31.5%, p < .0001).

Conclusion: Between 1987 and 1999, there was an increase in the proportion of the population who received outpatient treatment for anxiety disorders. Among patients receiving care, treatment became characterized by greater use of psychotropic medications, especially antidepressant medications, with nonsignificant trends toward less common use of psychotherapy.

(J Clin Psychiatry 2004;65:1166–1173)

Anxiety disorders are among the most prevalent psychiatric conditions in the United States.[1,2] During a 12-month period, they occur in an estimated 12.6%[1] to 17.2%[2] of the adult population. Anxiety disorders may have profound adverse effects on role functioning[3] and quality of life.[4] They are also associated with an increased risk of depression,[5] substance abuse,[6] coronary heart disease,[7] and suicide.[8] High prevalence and pervasive morbidity contribute to the economic burden of anxiety disorders.[9,10]

Most individuals with anxiety disorders receive no treatment for their symptoms. Epidemiologic[11–13] and clinical[14,15] studies document that anxiety disorders are frequently untreated. In one primary care study, for example, less than one half of patients with current generalized anxiety disorder and panic disorder reported having received any mental health treatment in the last month.[13] Even within specialty mental health settings, serious problems exist in the clinical recognition of anxiety disorders.[16]

Over the last several years, substantial progress has been made in the pharmacologic and psychological treatment of anxiety disorders. Antidepressant medications have become increasingly recognized as the pharmacologic treatment of choice for several anxiety disorders.[17,18] Specifically, medications with effects on serotonin neurotransmission and both serotonin and norepinephrine transmission are now recommended as first-line medications for several anxiety disorders including panic disorder,[21] generalized anxiety disorder,[22] social phobia,[19] and obsessive-compulsive disorder.[20] Experimental research also provides strong support for the efficacy of newer psychotherapy techniques, especially cognitive-behavioral therapy, for several common anxiety disorders.[23–25]

Little is known concerning the effects of these new treatments on patterns of treatment access and treatment provision for patients with anxiety disorders.[26,27] In the current report, we use data from 2 large nationally representative community surveys conducted in 1987 and 1999 to examine national trends in outpatient treatment of anxiety disorders. We examine trends in the rate of treatment and the types of treatment provided to these patients.

METHOD

Sources of Data

Data were drawn from the household components of the 1987 National Medical Expenditure Survey (NMES)[28] and the 1999 Medical Expenditure Panel Survey (MEPS).[27] Both surveys were sponsored by the Agency for Healthcare Research and Quality (AHRQ) to provide national estimates of the use, expenditures, and financing of health services. The NMES and MEPS surveys were conducted as national probability samples of the U.S. civilian, noninstitutionalized population. The survey methods of the NMES and MEPS are comparable and were designed to permit trend analyses in national health care use.

Study Samples

The 1987 NMES used a sampling design in which 15,590 households were selected from within 165 geographic regions across the United States. A sample of 34,459 individuals was included in the study, representing a response rate of 80.1%. The 1999 MEPS household component was drawn from a nationally representative subsample of the 1995 National Health Interview Survey, which used a sampling design similar to that of the 1987 NMES. A sample of 23,565 participants from 9,345 households was interviewed, which represents a 64.3% response rate. For both surveys, a designated informant was queried about all related persons who lived in the household.

AHRQ devised weights to adjust for the complex survey design and to yield unbiased national estimates. The sampling weights also adjust for nonresponse and poststratification to population totals based on U.S. census data. The weighting class nonresponse adjustment assumes that nonrespondents would have responded in a manner similar to that of respondents with similar sociodemographic and economic characteristics based on 49 cross-classification cells. More complete discussions of the design, sampling, and adjustment methods are presented elsewhere.[26–28]

Structure of Survey

Households selected for the 1987 NMES household survey[28] were interviewed in person 4 times to obtain health care utilization information for the 1987 calendar year. The 1999 MEPS[27] included a series of 3 in-person interviews. In both surveys, respondents were asked to record medical events as they occurred in a calendar/diary that was reviewed during each interview. Written permission was obtained from survey participants to contact medical providers that they or household members reported seeing during the survey period. Survey staff contacted medical providers to supplement and validate diagnostic and other clinical information about the medical visits reported by the respondents. The medical provider data validation included all hospitals, hospital physicians, home health agencies, and pharmacies reported by survey respondents. The data validation also included all office-based physicians who provided care to respondents receiving Medicaid, a 75% sample of surveyed households receiving care through a managed care plan or health maintenance organization, and a 25% sample of remaining households.

Visits for Anxiety Disorders

Respondents were asked the reason for every outpatient visit during the reference period. Conditions were recorded by interviewers as verbatim text and then subsequently coded by professional coders according to the *International Classification of Diseases,* Ninth Revision (ICD-9), as revised for the National Health Interview Survey.[29] Interviewers underwent 80 hours of training each, and coders all had degrees in nursing or medical record administration. A total of 5% of records were rechecked for errors; error rates in these rechecks were less than 2.5%. A staff psychiatric nurse established mental disorder diagnoses in cases of diagnostic ambiguity or uncertainty. Respondents who made 1 or more outpatient visits coded for the purpose of treating ICD-9/DSM-IV 300.0, 300.2, 300.3, or 308.3 were defined as having received treatment for an anxiety disorder, which includes panic disorder, generalized anxiety disorder, phobias, obsessive-compulsive disorder, acute stress disorder, other anxiety states, and anxiety disorders, unspecified.

Providers

The MEPS and NMES survey booklets solicit information on the type of health care professionals providing treatment at each visit. We classified health care professionals into the following groups: physicians of all specialties (a breakdown by physician specialty was not available for 1999), social workers, psychologists, and a residual group of other providers that included nurses, nurse practitioners, physician assistants, chiropractors, and other health care providers.

Psychotherapy

The NMES and MEPS asked respondents what type of care had been provided during each outpatient visit, using a flash card with various response categories. Visits that

included a specific indication that "psychotherapy/mental health counseling" was provided are considered psychotherapy visits.

Medications

The NMES and MEPS surveys ask for all prescribed medicines associated with each health care visit. Respondents are asked to supply the names of any prescribed medications purchased or otherwise obtained, the first and last dates taken, the number of times obtained, and the conditions associated with each medicine. We focus on prescribed psychotropic medications associated with visits for the treatment of anxiety disorders. Psychotropic medications were classified as antidepressants, anxiolytics, antipsychotics, mood stabilizers, or stimulants according to the *1999 Physicians' Desk Reference*.[30] Anxiolytics were subclassified into benzodiazepines and other agents, including buspirone and meprobamate. For analytic purposes, antidepressants were subclassified into selective serotonin reuptake inhibitors (SSRIs) (fluoxetine, sertraline, paroxetine, fluvoxamine, and citalopram), other newer antidepressants (venlafaxine, venlafaxine extended-release, mirtazapine, bupropion, and nefazodone), and tricyclic antidepressants and other older antidepressants.

Analysis Plan

Rates of treatment for anxiety disorders per 100 persons stratified by sociodemographic characteristics were computed for each survey year. Rates of psychotherapy and pharmacotherapy for the treatment of anxiety disorders were also computed. We then examined sociodemographic characteristics of respondents who reported 1 or more health visits for anxiety disorders in either survey year. An examination was also made of treatment characteristics of individuals ("outpatients") who report receiving treatment for anxiety disorders in each survey year. The χ^2 test was used to examine the strength of association between rates of treatment of anxiety disorders within sociodemographic categories and across survey years. Wald F tests were used to identify differences in means of continuous variables for the 2 survey years. Time trends are examined in the mean number of total health, physical health, mental health, and anxiety visits in each survey year by patients treated for anxiety disorders. These analyses exclude visits in the preceding or following calendar year that occurred as part of the same clinical treatment episode.

We used a logistic regression model to evaluate the effect of survey year on overall use of psychotropic medication, psychotherapy, antidepressant medication, anxiolytic medication, and the combinations of psychotherapy and antidepressant medication and psychotherapy and anxiolytic medication. To adjust for changes in patient characteristics between the survey years, we controlled for respondent age, sex, race, marital status, education, em-

Table 1. National Rates per 100 Persons of Treatment of Anxiety Disorders in 1987 and 1999 Stratified by Sociodemographic Characteristics[a]

Characteristic	1987 (N = 34,459)	1999 (N = 23,565)	χ^2	df	p
Total	0.43	0.83	21.3	1	< .001
Age, y					
< 18	0.06	0.34	4.0	1	.045
18–64	0.59	1.03	15.8	1	< .001
65+	0.45	0.92	3.8	1	.051
Sex					
Female	0.50	1.12	18.6	1	< .001
Male	0.34	0.52	3.3	1	.070
Race/ethnicity					
Black	0.15	0.24	0.6	1	.427
Hispanic	0.15	0.37	4.5	1	.035
White	0.51	1.03	18.6	1	< .001
Other[b]	0.13	0.38	0.9	1	.344
Marital status					
Married	0.56	0.86	5.5	1	.019
Divorced/separated	1.10	2.03	4.4	1	.036
Widowed	0.34	1.28	5.2	1	.023
Not married	0.39	0.69	2.8	1	.097
Education					
< High school	0.34	0.61	2.9	1	.088
High school	0.54	1.00	7.5	1	.006
> High school	0.75	1.13	4.4	1	.036
Employment status					
Employed	0.38	0.68	10.0	1	.002
Unemployed	0.54	1.31	15.6	1	< .001
Insurance					
Private insurance	0.46	0.79	9.7	1	.002
Public insurance	0.50	1.09	10.2	1	.002
No insurance	0.25	0.59	3.8	1	.054

[a]Data from 1987 National Medical Expenditure Survey[28] and the 1999 Medical Expenditure Panel Survey.[27] Rates are weighted estimates. See text for definition of anxiety disorders. Insurance groups are not mutually exclusive.
[b]Includes American Indian, Alaskan native, and Asian or Pacific Islander.

ployment status, and insurance status. A multiple linear regression model was used to evaluate the association between survey year and number of psychotherapy visits, controlling for the various sociodemographic covariates. All statistical analyses were performed using the SUDAAN software package[31] to accommodate the complex sample design and the weighting of observations. Alpha was set at .05, and all tests were 2-sided.

RESULTS

Rate of Treatment

Between 1987 and 1999, there was a significant increase in the overall rate of outpatient treatment of anxiety disorders. The rate of treatment nearly doubled from 0.43 per 100 persons in 1987 to 0.83 per 100 persons in 1999 (Table 1). Significant increases in the rate of outpatient treatment were evident for females, younger persons, whites, Hispanics, married or previously married persons, those with at least a high school education, and persons with either private or public insurance. In 1999, the rate of outpatient treatment for the Hispanic, black,

Table 2. Sociodemographic Characteristics of Outpatients Treated for Anxiety Disorders in 1987 and 1999[a]

Characteristic	1987, % (N = 132)	1999, % (N = 178)	χ^2	df	p
Age, y			2.8	2	.247
< 18	4.0	10.9			
18–64	84.4	75.8			
65+	11.6	13.4			
Sex			1.6	1	.205
Female	61.0	69.3			
Male	39.0	30.7			
Race/ethnicity			2.4	3	.488
Black	4.3	3.7			
Hispanic	2.9	5.3			
White	91.8	89.1			
Other[b]	1.0	1.9			
Marital status			3.2	3	.357
Married	58.1	46.8			
Divorced/separated	21.4	25.1			
Widowed	4.6	9.1			
Not married	15.9	19.0			
Education			2.4	2	.296
< High school	16.2	24.7			
High school	35.1	29.7			
> High school	48.7	45.6			
Employment status			0.1	1	.726
Employed	65.3	63.1			
Unemployed	34.7	36.9			
Insurance					
Private insurance	83.3	69.8	5.8	1	.017
Public insurance	30.1	34.3	0.5	1	.500
No insurance	11.7	7.8	1.2	1	.281

[a]Data from 1987 National Medical Expenditure Survey[28] and the 1999 Medical Expenditure Panel Survey.[27] Percentages are weighted estimates. The insurance groups are not mutually exclusive.
[b]Includes American Indian, Alaskan native, and Asian or Pacific Islander.

and other nonwhite populations remained far below the rate of treatment for whites. The highest rates of treatment were for separated, divorced, or widowed individuals; unemployed persons; and those with more than a high school education (Table 1).

There was a significant decrease in the proportion of patients treated for anxiety disorders that were privately insured (Table 2). Nevertheless, most outpatients who were treated for anxiety disorders in 1999 had private health insurance. In addition, a majority of the patients treated for anxiety disorders were white, female, between 18 and 64 years of age, and employed. In 1999, slightly less than one half of individuals treated for anxiety disorders were married or had more than a high school education (Table 2).

Total expenditures for the outpatient treatment of anxiety disorders were $1.14 billion in 1999. Changes in survey expenditure collection methods did not permit comparison with 1987 figures.

Pharmacologic Treatment

Between 1987 and 1999, the overall community rate of outpatient pharmacologic treatment for anxiety disorders increased from 0.22 to 0.58 per 100 persons ($\chi^2 = 32.8$,

df = 1, p < .0001). During this period, the community rate of outpatient antidepressant treatment of anxiety disorders increased from 0.08 to 0.37 per 100 persons ($\chi^2 = 37.4$, df = 1, p < .0001) and the community rate of outpatient anxiolytic treatment of anxiety disorders increased from 0.18 to 0.31 per 100 persons ($\chi^2 = 6.3$, df = 1, p = .012).

Among outpatients treated for anxiety disorders, the proportion who received a prescribed psychotropic medication increased from 52.1% in 1987 to 69.9% in 1999 (Table 3). After controlling for the possible confounding effects of sociodemographic characteristics, individuals treated for anxiety disorders were 2.7 times more likely to be treated with a psychotropic medication in 1999 than in 1987 (Table 4). Among outpatients taking medications for anxiety disorders, there was no significant change in the mean number of prescriptions for psychotropic medications filled for the treatment of anxiety disorders (Table 3).

In 1987, anxiolytics were the most commonly prescribed medications for the treatment of anxiety disorders. By 1999, however, antidepressants surpassed anxiolytics as the most commonly prescribed class of psychotropic medication used for anxiety disorder treatment. After adjusting for confounding sociodemographic factors, outpatients treated for anxiety disorders were 4.5 times more likely to receive an antidepressant medication in 1999 than in 1987 (Table 4). The increase in antidepressant use was primarily attributable to the availability of SSRIs, a class of antidepressant medication that was unavailable in 1987.

In 1999, anxiolytics were the second most commonly prescribed class of psychotropic medication for anxiety disorders. The proportion of outpatients treated for anxiety disorders who received anxiolytics remained little changed during the study period. In relation to antidepressants and anxiolytics, stimulants, mood stabilizers, and antipsychotic medications were relatively rarely prescribed for the treatment of anxiety disorders (Table 3).

Psychotherapy

From 1987 to 1999, the overall community rate of psychotherapy for anxiety disorders increased from 0.26 to 0.40 per 100 persons ($\chi^2 = 4.1$, df = 1, p = .044). After controlling for changes in background sociodemographic characteristics, there was a significant decline in the likelihood of receiving psychotherapy. Patients treated for anxiety disorders in 1999 were approximately half as likely to receive psychotherapy as they were in 1987 (OR = .47) (Table 4). In unadjusted analyses, there was a statistically nonsignificant trend toward declining use of psychotherapy from 60.5% in 1987 to 48.0% in 1999 (Table 3). Among those who received psychotherapy, the mean annual number of psychotherapy visits remained little changed, although there was a significant decline in

Table 3. Treatment Characteristics of Outpatients Treated for Anxiety Disorders in 1987 and 1999[a]

Characteristic	1987 (N = 132)	1999 (N = 178)	t	χ^2	df	p
Paid expenditures for anxiety, %						
Medicare	3.5	9.9	2.4			.016
Medicaid	4.3	12.5	2.5			.013
Other public sources	5.6	3.9	0.4			.488
Private insurance	30.5	37.3	1.1			.259
Self	53.2	31.5	3.7			< .001
Other	2.9	5.1	0.7			.471
No. of visits for anxiety patients						
Total	17.1	17.3	0.1			.956
Mental health	8.7	7.7	0.6			.544
Anxiety	7.8	7.1	0.4			.674
Physical health	8.4	9.6	0.8			.432
Psychotherapy, %	60.5	48.0		3.2	1	.075
Mean no. of visits	9.7	10.1	0.2			.877
Mean self-payment, %[b]	48.9	34.1	2.2			.032
Pharmacotherapy, %	52.1	69.9		7.0	1	.008
Antidepressants	18.3	44.9		21.1	1	< .001
SSRIs	0	30.1		49.8	1	< .001
Venlafaxine	0	3.5		5.4	1	.021
Tricyclics & older antidepressants	14.8	8.1		3.2	1	.073
Other	3.5	11.4		6.2	1	.013
Anxiolytics	42.9	37.2		0.8	1	.382
Benzodiazepines	42.3	31.7		2.9	1	.091
Other	1.1	8.0		7.9	1	.005
Antipsychotics	2.2	3.4		0.4	1	.514
Mood stabilizer	3.4	7.7		2.3	1	.127
Stimulant	0	1.7		3.4	1	.067
Mean no. of prescriptions	7.0	7.4	0.4			.708
Mean self-payment, %[b]	56.2	45.7	1.6			.105
Psychotherapy and pharmacotherapy, %	29.0	32.0		0.2	1	.622
Psychotherapy and antidepressants	13.6	25.4		5.6	1	.018
Psychotherapy and anxiolytics	21.1	12.8		3.0	1	.082
Provider type, %						
Physician	76.4	77.9		0.1	1	.819
Psychologist	17.9	11.9		1.5	1	.222
Social worker	4.6	14.7		3.9	1	.050
Other	22.2	19.0		0.4	1	.537

[a]Data from 1987 National Medical Expenditure Survey[28] and the 1999 Medical Expenditure Panel Survey.[27] Percentages are weighted estimates.
[b]"Mean self-payment, %" denotes the group mean percentage of self payments. Individuals may have used more than 1 class of antidepressant.
Abbreviation: SSRIs = selective serotonin reuptake inhibitors.

Table 4. Adjusted Year Effect of Psychotherapy, Psychopharmacotherapy, Combined Treatment, Antidepressant Treatment, and Number of Psychotherapy Visits for Treatment of Anxiety Disorders[a]

Treatment	Year Effect	95% CI
Psychotherapy, any, OR	0.47	0.25 to 0.88
No. psychotherapy visits, β	–1.91	–6.40 to 2.58
Pharmacotherapy, any, OR	2.73	1.51 to 4.95
Antidepressants, any	4.50	2.48 to 8.18
Anxiolytics, any	0.85	0.48 to 1.49
Psychotherapy and pharmacotherapy, OR	1.13	0.58 to 2.21
Psychotherapy and antidepressants	2.15	0.99 to 4.67
Psychotherapy and anxiolytics	0.54	0.25 to 1.16

[a]Data from 1987 National Medical Expenditure Survey[28] and the 1999 Medical Expenditure Panel Survey.[27] Year effect estimates the odds ratio (OR) of service in 1999 relative to 1987 controlling for age, sex, race, marital status, education, employment status, and insurance status.

($\chi^2 = 16.7$, df = 1, p = .0001) and the community rate of treating anxiety disorders with psychotherapy and an anxiolytic remained essentially unchanged (0.09 [1987] to 0.10 [1999] per 100 persons, $\chi^2 = 0.3$, df = 1, p = .61).

There was little change in the proportion of treated patients who received at least 1 psychotherapy visit along with use of any psychotropic medication (Table 3). However, there was a significant increase in the proportion of treated outpatients who were treated with psychotherapy and an antidepressant medication from 1987 (13.6%) to 1999 (25.4%). In the logistic regression model, this difference fell slightly below the level of statistical significance. There was a statistically nonsignificant trend toward a decrease in the proportion of treated patients treated with anxiolytic medications in combination with psychotherapy during the study period.

Provider Type

In both survey years, the treatment of anxiety disorders for a great majority of patients involved visits to a physician (Table 3). In both years, roughly 3 of 4 patients treated for anxiety disorders received some treatment for their condition from a physician. Treatment of anxiety disorders by social workers, though much less common, tended to increase (p = .05).

DISCUSSION

There has been a recent national increase in the outpatient treatment of anxiety disorders. Between 1987 and 1999, the proportion of Americans receiving outpatient treatment for anxiety disorders nearly doubled. At the same time, treatment more often included medications, especially SSRI antidepressants, while there was a slight decline in the use of psychotherapy, which became significant after accounting for changes in background patient characteristics. Nonetheless, because of the overall expansion in the treatment of anxiety disorders, there was

the proportion of psychotherapy expenditures that were self-payment (out-of-pocket).

Combined Treatment

Between 1987 and 1999, the overall community rate of combined treatment of anxiety disorders with psychotherapy and a psychotropic medication increased from 0.12 to 0.27 per 100 persons ($\chi^2 = 9.9$, df = 1, p = .0018). Over this period, the community rate of treating anxiety disorders with psychotherapy and an antidepressant medication increased from 0.06 to 0.21 per 100 persons

an absolute increase in the proportion of the population receiving psychotherapy for the treatment of anxiety disorders.

Several factors may have contributed to the increase in the treatment of anxiety disorders. During the 1990s, the pharmaceutical industry engaged in an intensive effort to promote the treatment of anxiety disorders. Advertisements, directed at physicians and the general public, may have increased clinical attention to anxiety disorders. In addition, mental health advocacy for anxiety disorders matured during this period. The National Anxiety Disorders Screening Day program, which started in 1994, now operates across the country in over 1200 clinical sites to promote recognition and treatment.[32] The Anxiety Disorders Association of America, which reorganized and expanded in 1990, may have further contributed to increasing treatment by providing consumer education material to the public and a national network to facilitate local mental health referrals.[33] The availability of brief clinical screening instruments for the common anxiety disorders[34,35] may have also promoted clinical recognition and diagnosis.

Despite the increase in rate of treatment during the 1990s, the rate of outpatient treatment for anxiety disorders for the black and Hispanic populations and for people with less than a high school education remained far below the rates for the white population and for people with greater educational achievement. Because several of the common anxiety disorders may be more prevalent among blacks than other racial/ethnic groups[1] and more common among persons with less rather than more formal education,[1,36,37] the current findings suggest that an unmet need for care is particularly great among these groups.

During the years addressed in our study, antidepressants, especially SSRIs, became more commonly used to treat anxiety disorders. This shift parallels evidence from controlled clinical trials demonstrating the safety and efficacy of SSRIs for a range of anxiety disorders.[17–22] It is also broadly consistent with expert opinion indicating increasing support for SSRIs and declining support for older antidepressants as first-line treatments for anxiety disorders.[38,39] Since the completion of the 1999 survey, several of the newer antidepressants, including venlafaxine extended-release (social anxiety disorder), sertraline (social anxiety disorder), and paroxetine (posttraumatic stress disorder), have received U.S. Food and Drug Administration approval for the treatment of additional anxiety disorders.

Anxiolytic medications were also commonly used to treat anxiety disorders. Although there was a trend toward declining use of benzodiazepines, they continued to be used by nearly one third of outpatients treated for anxiety disorders in 1999. Despite lingering public concern over the risk of benzodiazepine abuse and dependence,[40,41] benzodiazepines remain a commonly used treatment. The trend in benzodiazepine use parallels recommendations of some expert psychopharmacologists who continue to endorse benzodiazepines as a primary or adjunctive treatment for several anxiety disorders.[42] Other researchers have highlighted potential risks of benzodiazepines, especially in patients with comorbid alcohol use disorders[43] and in older patients prescribed long-acting compounds.[44]

Psychotherapy has traditionally been the predominant treatment for anxiety disorders. Although the absolute rate of psychotherapy use for the treatment of anxiety disorders increased slightly during the 1990s, psychotherapy has tended to be used by a declining percentage of treated patients. This decline among treated patients occurred despite accumulating evidence of the efficacy of specific psychotherapies, especially cognitive-behavioral therapy, for anxiety disorders.[25–27] Previous research suggests that problems with access to psychological treatment of anxiety disorders may be particularly common among patients treated in the primary care sector.[13] Because no information is available on the type of psychotherapy, it is not possible to evaluate access to cognitive-behavioral therapy or other evidence-supported psychological treatments.

In 1999, approximately one third of patients treated for anxiety disorders received a combination of medication and psychotherapy. Although combination treatment is supported by treatment guidelines[16] and expert opinion,[37] there is currently little experimental evidence concerning this clinical practice. In one randomized controlled trial of imipramine, cognitive-behavioral therapy, and their combination for panic disorder, combined treatment was superior to either treatment alone during the maintenance phase.[45] Much remains to be learned about the clinical conditions under which combined treatments may be expected to yield outcomes that are superior to either medication or psychotherapy alone.

The overall rate of treatment of anxiety disorders in 1999 among adults, aged 18 to 64 years, was approximately 1.0%. By contrast, the National Comorbidity Survey (NCS) (1990–1992) reported that 3.6% of adults, aged 15 to 54 years, received outpatient mental health treatment for an anxiety disorder in 1 year.[11] This disparity may reflect substantial methodological differences in the surveys. Whereas the MEPS figure (1.0%) includes only outpatient treatment specifically for the treatment of anxiety disorders, the NCS finding (3.6%) captures all outpatient treatment for any mental health or substance abuse problems by individuals who meet diagnostic criteria for an anxiety disorder. These methodological differences relate to underlying differences in the primary aims of the 2 surveys: the NMES and MEPS seek to measure service use over time, and the NCS seeks to quantify psychopathology in the community.

The national outpatient treatment costs for anxiety disorders exceeded $1 billion ($1.14 billion) in 1999. An earlier economic analysis, based on the prevalence-based

human capital approach, estimated that outpatient mental health costs for treatment of adults with anxiety disorders were \$3.22 billion per year.[9] The prevalence-based human capital method yields higher cost figures than the current method because it captures all incremental mental health care provided to persons with anxiety disorders whether or not the anxiety disorder was diagnosed and treated. By contrast, the current method captures only the costs of treating outpatients for anxiety disorders. A substantial volume of the outpatient mental health treatment used by patients with anxiety disorders may be for the treatment of non–anxiety disorders.[16] In the prevalence-based human capital study, direct inpatient psychiatric treatment costs of anxiety disorders (\$10.04 billion per year) greatly exceeded outpatient mental health treatment costs.[9]

The current results have several limitations. NMES and MEPS collect data from household informants who may not know all of the services utilized by household members. Stigma and recall problems threaten the accuracy of the survey data. Because NMES and MEPS condition data are available only to 4 DSM-IV/ICD-9 digits, it was not possible to include posttraumatic stress disorder (309.81) or anxiety disorders due to specific medical illness (293.89) in the analysis. Perhaps more importantly, it is not possible, without an independent measure of symptoms, to determine whether patients who received treatment actually met diagnostic criteria for the selected anxiety disorder codes. In addition, sample size restrictions prevent detailed assessments of individual anxiety disorders. Although nonresponse adjustments help to limit selection bias, the modest response rate to the 1999 survey introduces uncertainty into the survey estimates. The 1999 survey also did not distinguish physicians by specialty, so we are unable to assess the role of psychiatrists separately from nonpsychiatrist physicians.

CONCLUSION

In recent years, a growing number of Americans have received treatment for anxiety disorders. Nonetheless, treatment rates remain far below prevalence estimates from community epidemiologic studies. Among those who receive care, trends in pharmacologic treatment are broadly consistent with experimental research and expert opinion in support of increasing use of newer antidepressants and a continuing role for benzodiazepines. Although progress has been made in these areas, much remains to be done to promote access to outpatient care of anxiety disorders.

Drug names: bupropion (Wellbutrin and others), buspirone (BuSpar and others), citalopram (Celexa and others), fluoxetine (Prozac and others), imipramine (Tofranil and others), meprobamate (Miltown, Tranmep, and others), mirtazapine (Remeron and others), nefazodone (Serzone and others), paroxetine (Paxil and others), sertraline (Zoloft), venlafaxine (Effexor).

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