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CME Objectives
After completing this CME activity, physicians practicing clinical psychiatry should be able to:
- Outline the comorbidity and panic characteristics for patients with panic disorder
- Recognize increased medical service utilization in panic patients relative to other primary care patients
- Characterize the nature of the usual care for panic patients presenting in primary care environments and document the outcomes of treatment

Statement of Need and Purpose
Physicians responding to articles in *The Journal of Clinical Psychiatry* and its related CME activities have indicated a need to know more about the diagnosis and management of panic disorder in the primary care setting. This CME enduring material presents current information to address that need. There are no prerequisites for participating in this CME activity.

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Panic Disorder in the Primary Care Setting: Comorbidity, Disability, Service Utilization, and Treatment

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Background: Increased medical service utilization in patients with panic disorder has been described in epidemiologic studies, although service use in primary care panic patients relative to other primary care patients is less well characterized. Inadequate recognition of panic has been shown in several primary care studies, although the nature of usual care for panic in this setting has not been well documented. This study aimed to document increased service use in panic patients relative to other primary care patients and to characterize the nature of their usual care for panic and their outcome.

Method: Using a waiting room screening questionnaire and follow-up telephone interview with the Composite International Diagnostic Interview, we identified a convenience sample of 81 patients with panic disorder (DSM-IV) and a control group of 183 psychiatrically healthy patients in 3 primary care settings on the West Coast and determined psychiatric diagnostic comorbidity, panic characteristics, disability, and medical and mental health service use, including medications. A subsample (N = 41) of panic patients was reinterviewed 4–10 months later to determine the persistence of panic and the adequacy of intervening treatment received using the Harvard/Brown Anxiety Disorders Research Program study criteria for cognitive-behavioral therapy (CBT) and an algorithm developed by the authors for medications.

Results: Seventy percent of panic patients had a comorbid psychiatric diagnosis. Patients had more disability in the last month (days missed or cut down activities) ($p < .01$), more utilization of emergency room and medical provider visits ($p < .01$), and more mental health visits ($p < .05$). Despite the latter, only 42% received psychotropic medication, 36% psychotherapy, and 64% any treatment. On follow-up, 85% still met diagnostic criteria for panic, and only 22% had received adequate medication (type and/or dose) and 12% adequate (i.e., CBT) psychotherapy.

Conclusion: These findings suggest a need for improved treatment interventions for panic disorder in the primary care setting to decrease disability and potentially inappropriate medical service utilization.

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Panic disorder affects 2% to 3% of the adult population and is associated with significant impairment in social and vocational activities whether the patients are drawn from psychiatric,[1] epidemiologic,[2] or primary care[3–5] settings. Because of the protean physical manifestations of panic attacks, which can mimic cardiorespiratory, gastrointestinal, and otoneurologic illness, a high proportion of patients with panic disorder initially present in the general medical setting[6] (80% according to one estimate[7]). Over 70% of panic patients use primary care to obtain mental health services.[8] Consequently, panic disorder is overrepresented in patient populations with chest pain and normal coronary arteries,[9] palpitations,[10] irritable bowel syndrome,[11] and unexplained vertigo and dizziness[12] and in labile hypertension patients tested for pheochromocytoma.[13]

Relatively few studies have examined patients with panic disorder as they present in the primary care medical setting. The prevalence of panic disorder in this setting has been estimated to range between 2% and 13% with a median prevalence of 4% to 6%.[14–19] In community samples, patients with panic disorder use primary care services at 3 times the rate of other patients.[20] Epidemiologic data indicate that they are more likely to have 6 or more visits to the general medical service than other psychiatric or control samples,[21] have more medical visits than control subjects,[22] and be heavily represented (22%)

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among distressed, high health care utilizers.[23] Only one study[24] has documented greater service use in patients with panic compared to patients without panic seen in the same primary care setting, and this British survey did not use structured psychiatric interviews or control for whether psychiatric (e.g., depressive) or medical comorbidity could have accounted for this increased service use.

Despite the increased use of health care services in panic patients, there is a high rate of physician nonrecognition of panic disorder (61% in primary care).[16] Other studies have shown that even when anxiety is recognized in the primary care setting,[25] treatment remains inadequate. Even in psychiatric settings, panic patients have markedly low rates of utilization for both cognitive-behavioral therapy[26–28] and adequate antidepressant treatment.[26,28,29]

There are few data documenting the usual care (i.e., antipanic treatments) that patients with panic disorder receive in the primary care setting. Only one study[30] provided suggestive data on utilization of antipanic treatment in primary care and showed that minor tranquilizers were used more often (10%–30%) than antidepressants (5%–24%) for a heterogeneous group of patients with either panic, generalized anxiety disorder (GAD), or phobia. No study has examined the kinds of treatments provided for patients with panic disorder in the primary care setting, whether they are "adequate," and the kind of outcomes they produce in these treated patients.

Our study examines the medical and psychiatric comorbidity, vocational disability, medical and mental health service utilization, and antipanic treatment received in a large sample of primary care patients with panic disorder and provides limited data on outcome 6 to 10 months later, including the nature of intervening antipanic treatment in a subset of these patients. Panic patients were compared with control patients from the same setting who had no current psychiatric diagnosis. We chose a convenience sample because of the prohibitive cost of screening large consecutive samples of patients and the important preliminary information that could be gained from such a sample given the limited information available from published studies on patients with panic disorder presenting in the primary care setting.

METHOD

Setting

A convenience sample of patients with panic disorder was identified in 3 academic medical center primary care clinics on the West Coast (the University of Washington General Internal Medicine Clinic [GIM]; the University of Washington Harborview Medical Center Adult Medical Clinic [HMC]; and the University of California, San Diego, Family Medicine Clinic [UCSD]). Screening took place over a period of 4 to 6 weeks, during several half-day clinics each week. Two screening times were selected each week from among 8 half-day clinic times, based on convenience and to coincide with periods where patient flow was maximal.

A self-report screening instrument using only 2 probe questions (Did you ever have a spell or attack when all of a sudden you felt frightened, anxious, or uneasy when most people would not be afraid? Did you ever have a spell or attack when for no reason your heart began to race, you felt faint, or you couldn't catch your breath?) was developed to identify patients who reported a recent panic attack episode. This instrument proved to be highly sensitive but not terribly specific for panic.[31] A total of 1476 (511 UCSD, 534 GIM, 431 HMC) patients filled out the screening questionnaire in the waiting room prior to their appointment. Of 559 screen-positive patients, 309 (55%) (97 UCSD, 90 GIM, 122 HMC) agreed to have a telephone interview and were paid $20. Of 916 screen-negative patients, 160 (17%) (116 UCSD, 17 GIM, 27 HMC) were also selected to be interviewed, based on interviewer availability and workload, to clarify the sensitivity of the screening instrument. There were no differences in age or gender between interviewed and noninterviewed patients.

Patients were interviewed by telephone within several days of filling out the screening questionnaire, using portions of the Composite International Diagnostic Interview (CIDI)[32] modified for DSM-IV. From this interview, we included sections for panic disorder, GAD, social phobia, alcohol and substance abuse (present in the past year), and major depression (in the past month). This structured interview is designed to be used by nonclinician interviewers and has been shown to have acceptable reliability for mood and anxiety disorders diagnoses.[33–36] Telephone interviews utilizing structured psychiatric interviews have been found to have high concordance with in-person interviews.[37,38] A master's level social worker (E.M.), bachelor's level psychologist (R.T.), and doctoral-level psychologist (J.M.) performed the interviews at the GIM, HMC, and UCSD sites, respectively. The first and third interviewers were highly experienced at performing structured interviews. The second interviewer was trained by the first, and these 2 interviewers, being in the same city, were able to establish reliability by simultaneously interviewing 10 consecutive patients and reaching perfect

diagnostic agreement. The CIDI is a reliable instrument in the hands of trained lay interviewers. Furthermore, studies have shown that the principal source of diagnostic disagreement for panic is information variance (60%), rather than rater error (10%) or interpretation (20%).[39]

The prevalence of panic disorder at the 3 sites was calculated using the actual proportion of interviewed patients with panic disorder identified by CIDI interview corrected for the overall proportion of screen-positive patients. The mean prevalence of 5.5% was highly consistent with prevalence figures from other studies and served to validate the screening and interview procedures. Details of the screen results and diagnostic sensitivity and specificity are contained in a companion article.[31] Briefly, the screening questionnaire had a negative predictive value of 0.98 (very few "false negatives"—few panic cases were missed) and a positive predictive value of 0.40 (significant number of "false positives").

Of a total of 469 patients interviewed across the 3 sites, 81 patients with panic disorder and 209 patients with no current psychiatric diagnosis were identified (the remainder had a mixture of other diagnoses). Of the 209 found to have no current diagnosis on interviews, 12% (N = 26) were not included since it was determined upon interview that within the past 6 months they were either receiving medication for an emotional problem (N = 24) or had been hospitalized for an emotional problem (N = 2) (i.e., although not currently psychiatrically ill, they had recently been so). Of the 24 patients who received medication, 17 were receiving antidepressants and 7 were given lithium or an antipsychotic medication. The no current diagnosis group was selected as an important comparison group because the presence of these patients in the clinic indicates greater likelihood of medical morbidity and service utilization and serves as a more stringent test of whether panic disorder in the medical setting increases service use.

Assessment

The following information was gathered during the assessment: demographic information, presence of psychiatric diagnoses according to DSM-IV using the CIDI interview (major depression, social phobia, agoraphobia, panic disorder, GAD, and alcohol and substance abuse), and presence of specific medical illnesses that were identified not by medical record or patient interview but by the reported current use of prescription medication using criteria developed for calculating the chronic disease score (CDS).[40] This measure of medical illness has been validated by its high correlation with physician assessments and subsequent medical morbidity and mortality over the next year.[41] We examined degree of functional impairment (e.g., inability to work or having to cut down on work) using the CIDI interview and current use of psychotropic medication, psychotherapeutic services, hospitalization, and emergency room and general medical outpatient visits, using questions from the Patient Outcomes Research Team (PORT) study on depression.[42]

A subsample of 41 of the same 81 patients were able to be recontacted and reinterviewed over the phone 6 to 10 months later. This subgroup did not differ significantly from the other 40 patients on demographic, clinical, and disability measures. This second interview was to assess the presence of comorbid posttraumatic stress disorder (PTSD) and the number of unexplained somatic symptoms using the CIDI interview, to determine the outcome of panic on the basis of presence or absence of a CIDI panic diagnosis, and to gather more specific information about type and dose of antipanic medication taken and the type of psychotherapy (if any) utilized since the time of the initial CIDI interview, using questions from the Harvard/Brown Anxiety Disorders Research Program (HARP) study.[27] Adequacy of medication was assessed using an algorithm[43] that requires use of known effective antidepressants (serotonin selective reuptake inhibitors [SSRIs], tricyclic antidepressants, monoamine oxidase inhibitors) at sufficient "antidepressant" dose levels for at least 4 weeks or use of regular high-potency benzodiazepines at doses of at least 2 mg of alprazolam equivalents daily. Only cognitive-behavioral therapy (CBT) was considered adequate "psychological" treatment and was identified using probe questions from the HARP study describing standard cognitive or behavioral interventions in simple terms.

Analysis

Differences by site for all dependent variables, except principal diagnosis of panic, were analyzed using analyses of variance or chi-square analyses within the panic and no current psychiatric diagnosis patient groups. Since there were no significant differences among the sites, data from the 3 sites were combined. Descriptive statistics were generated for patients with panic disorder. Patients with panic disorder were compared with patients with no current diagnosis on demographic characteristics, presence of comorbid medical illness, disability items, and service and treatment utilization using chi-square analyses with corrections for continuity for the discrete variables and analyses of covariance (ANCOVAs) for the continuous variables. Covariates included marital status

Table 1. Demographic and Medical Data for Patients With Panic Disorder and No Current Psychiatric Diagnosis

Variable	No Current Diagnosis[a] (N = 183)	Panic Disorder[a] (N = 81)	Statistic[b]
Demographics			
Age, mean ± SD, y	42.3 ± 14.8	43.3 ± 9.2	0.58
Women	59.0	54.3	0.33
Completed high school	92.9	91.4	0.03
White	57.9	65.4	1.02
Married	53.0	25.9	15.58***
Medical illness			
Chronic disease score, mean ± SD	835.5 ± 850.6	1020.1 ± 1169.7	1.28
Coronary and peripheral disease	2.7	3.7	0.01
Epilepsy	0.5	4.9	3.70*
Hypertension	13.7	16.0	0.10
Human immunodeficiency virus	1.6	3.7	0.35
Rheumatoid arthritis	1.1	2.5	0.09
High cholesterol	3.8	1.2	0.29
Malignancies	0.5	0.0	0.01
Heart disease	3.8	7.4	0.87
Diabetes	4.9	6.2	0.01
Ulcers	4.9	8.6	0.79
Respiratory illness, asthma	5.5	7.4	0.11
Thyroid disorders	7.7	4.9	0.29
Gout	1.1	0.0	0.03
Crohn disease and bowel inflammation	1.1	0.0	0.03
Pain	4.4	9.9	2.10
Pain and inflammation	4.9	9.9	1.54
At least 1 of the above medical conditions	46.2	53.1	2.07

[a]All values are percentages unless otherwise specified.
[b]For chi-square values, df = 1; for t values, df = 262.
*p = .05. ***p < .001.

Table 2. Comorbidity and Panic Characteristics for Patients With Panic Disorder (N = 81)[a]

Variable	Percent
Psychiatric comorbidity	
Major depression	33.3
Social phobia	33.3
Agoraphobia	25.9
Generalized anxiety disorder	35.8
Substance abuse	14.8
Posttraumatic stress disorder[b]	12.2
Somatization disorder[b]	0.0
Number of somatic symptoms,[b] mean ± SD	6.3 ± 2.8
Number of comorbid diagnoses, mean ± SD	1.5 ± 1.4
At least 1 comorbid diagnosis from above	70.4
Panic characteristics	
Patient told a doctor about panic attacks	70.4
Patient changed everyday activities because of fear of attacks	53.1
Worried about attacks happening	70.0
Mean number of panic symptoms (of 14), mean ± SD	8.8 ± 2.6

[a]All values are percentages unless otherwise stated.
[b]Calculated from subsample of 41 patients.

because it differed between the 2 groups; CDS to control for medical illness severity, despite comparability between groups on this measure; and current major depression to control for comorbidity, since it represents the most significant confound of panic disorder effects on disability and service use. Due to the skewness of the disability and service utilization data, nonparametric tests based on ranks (Kruskal-Wallis analyses of variance) were performed in addition to the parametric ANCOVAs. In all but one case, the significance of the nonparametric tests mirrored the parametric tests. Therefore, only the parametric statistics are reported. In addition, because disability and service data were also highly skewed, we dichotomized these variables as the proportion of patients with any loss of function or service use and subjected them to chi-square analyses with corrections for continuity. This also provided a more clinically relevant measure of the number of patients affected. Also, data on specific treatments used, panic outcome, and treatment adequacy were tabulated for descriptive purposes.

RESULTS

Table 1 compares the demographic and medical data for the panic and no current psychiatric diagnosis patients. There was a significantly larger proportion of patients without a psychiatric diagnosis who were married. The 2 groups did not differ on any other demographic variable. Almost half of each patient group had at least 1 medical condition. However, the prevalence of medical illness did not differ between patients with panic and those with no current diagnosis. Other than for epilepsy, the groups did not differ in mean CDS or number or type of medical conditions.

Table 2 depicts the clinical characteristics of the 81 panic patients. Diagnostically, in the last year, there was substantial co-occurring Axis I comorbidity in the patients with panic disorder (70.4%), with notable rates of depression, social phobia, GAD, and agoraphobia. There were lower rates of PTSD and substance abuse. No patient received a diagnosis of somatization disorder. However, patients averaged 6 medically unexplained somatic symptoms.

About 70% of the patients told a doctor about their panic attacks. More than half of the panic patients changed their everyday activities because of fear of attacks, while 15% were very worried about their attacks. The patients had a mean of 9 of the 14 possible panic symptoms.

Table 3. Disability in the Past 30 Days in Patients With Panic Disorder and No Current Psychiatric Diagnosis

Disability in Past 30 Days	No Current Diagnosis (N = 183)	Panic Disorder (N = 81)	Statistic[a]
No. of days totally unable to work or carry out normal activities, mean ± SD	1.3 ± 3.7	4.5 ± 6.7	5.25*
At least 1 day unable to work or carry out normal activities, %	28.7	59.3	20.82***
No. of days unable to work or carry out normal activities due to emotional problems, mean ± SD	0.2 ± 1.3	3.3 ± 5.3	15.97***
At least 1 day unable to work or carry out normal activities due to emotional problems, %	4.9	51.9	76.37***
No. of days had to cut down usual activities, mean ± SD	3.3 ± 5.9	7.9 ± 9.3	3.29
At least 1 day cutting down on activities, %	46.7	67.1	8.39**
No. of days had to cut down usual activities due to emotional problems, mean ± SD	0.8 ± 3.3	5.7 ± 7.9	12.37***
At least 1 day cutting down on usual activities due to emotional problems, %	11.5	57.5	59.71***
For patients who cut down on usual activities, rating of how much usual activities were cut down, mean ± SD[b]	3.9 ± 3.1	2.8 ± 2.5	7.85**

[a]For chi-square values, df = 1; for F values, df = 1,260. Between-group F test with current major depression, marital status, and chronic disease score (CDS) as covariates.
[b]0 = no activities, 10 = carried out all activities; F value df = 1,260.
*p < .05. **p < .01. ***p < .001.

Table 4. Service Utilization in the Past 6 Months for Patients With Panic Disorder in Comparison to Patients With No Current Psychiatric Diagnosis

Variable	No Current Diagnosis (N = 183)	Panic Disorder (N = 81)	Statistic[a]
No. of nights hospitalized for physical problems, mean ± SD	0.3 ± 1.1	1.3 ± 5.0	4.96[b,*]
At least 1 night hospitalized for physical problems, %	10.4	12.3	0.07
No. of nights hospitalized for emotional problems, mean ± SD	0.0 ± 0.0	2.9 ± 17.4	16.18[b,***]
At least 1 night hospitalized for emotional problems, %	0.0	8.6	13.07***
No. of trips to the hospital emergency room, mean ± SD	0.4 ± 0.8	1.3 ± 2.3	6.70**
At least 1 trip to the emergency room, mean ± SD	26.9	45.7	8.13**
No. of visits to medical providers, mean ± SD	5.1 ± 7.5	8.2 ± 11.1	6.72**
Greater than 6 visits to a medical provider, %	15.9	31.3	6.98**
No. of visits to mental health providers, mean ± SD	0.5 ± 2.5	8.4 ± 15.7	28.67***
At least 1 visit to a mental health provider, %	8.2	53.1	63.41***
Of those visiting a mental health provider, percent visiting a	N = 15	N = 43	
Psychiatrist	13.3	53.5	5.76*
Psychologist	26.7	25.6	0.01
Social worker	33.3	16.3	1.07
Psychiatric nurse	0.0	16.3	1.45
Counselor	20.0	32.6	0.35

[a]For chi-square values, df = 1; for F values, df = 1,260. Between-group F test with current major depression, marital status, and CDS as covariates.
[b]Kruskal-Wallis 1-way ANOVA was not significant, $\chi^2 = 0.1$, df = 1.
*p < .05. **p < .01. ***p < .001.

Table 3 shows that after controlling for depression, medical comorbidity (CDS score), and marital status, compared with patients with no current diagnosis, patients with panic disorder had a markedly greater rate of disability in the past 30 days, whether measured by an inability to work or cutting down on their work. This was true whether or not the disability was due to emotional problems.

Approximately 60% of the panic patients had at least 1 day in which they could not carry out their normal activities in comparison to less than 30% of the no current diagnosis patients. Not surprisingly, panic patients were 10 times more likely to be unable to work owing to emotional problems than patients with no current diagnosis. The same pattern of results was observed for days in which patients had to cut down on usual activities. For those patients who had to cut down on their usual activities, there was a trend for panic patients to report greater disability.

The service utilization for the past 6 months is presented in Table 4. There was a trend for panic patients to have more nights hospitalized for physical problems. However, this difference was due to outliers and was not significant using the nonparametric test. As would be expected, panic patients were more likely to be hospitalized for emotional problems. Most importantly, patients with panic disorder reported greater rate of use of the emergency room and outpatient physician visits. Panic patients

Table 5. Usual Care Received (Medications and Psychotherapy) and 6- to 10-Month Outcome for Patients With Panic Disorder (N = 81)

Medications and Psychotherapy	Percent
Antipanic medication	42.0
Selective serotonin reuptake inhibitor	13.6
Tricyclic antidepressant	21.0
Venlafaxine	2.5
Bupropion	3.7
Nefazodone	4.9
Benzodiazepine	7.4
Trazodone	6.2
Combination	14.8
Psychotherapy	36.0
Medication or psychotherapy	64.0
Follow-up panic outcome (N = 41)	
Continued panic	85.4
Adequate medication	22.0
Adequate cognitive-behavioral therapy	12.2

averaged more than 1 visit in the emergency room in the past 6 months in comparison to only 0.4 visits for the no current diagnosis patients. Panic patients also had more visits to outpatient medical providers than did the no current diagnosis patients. Twice as many panic patients (31%) had more than 6 monthly medical provider visits compared with the no current diagnosis patients.

Panic patients had significantly greater number of visits to mental health providers. However, examination of patients in both groups who had at least 1 visit with a mental health provider showed only a trend level difference for panic patients to be more likely to see a psychiatrist.

Table 5 documents the type of psychotropic medications currently being used in these patients with panic disorder. As can be seen, a large number of these patients (over half), despite having a panic disorder diagnosis, were not receiving any medication. Moreover, many of those receiving medication were receiving medicines that are either ineffective (bupropion)[44] or are not yet proven effective (nefazodone) for panic; or were receiving low, ineffective doses of effective medication (e.g., 50 mg of a tricyclic or trazodone at bedtime; p.r.n. low-dose benzodiazepines); or had not been treated for an adequate duration (e.g., sertraline for 2 weeks). Our reinterview of a subsample of these panic patients 6 to 10 months later (N = 41) to gather more specific information on dose and duration of treatment indicated that less than 25% of this sample was actually receiving adequate medication by the type, dosing, and duration criteria noted in the method. Moreover, even a smaller proportion of patients (12%) were receiving adequate psychotherapy defined quite liberally as *any* more than transient use of a cognitive or behavioral method, despite the fact that over one third reported visits to a nonmedical mental health practitioner where they were presumably receiving some kind of psychotherapy. Finally, the overall rate of remission of panic (i.e., patients no longer meeting DSM-IV criteria for panic disorder by CIDI) was less than 20% on average, a very poor outcome indeed. However, a small proportion of the 80% of nonremitted patients, although still meeting diagnostic criteria, anecdotally reported some reduction in attack frequency or symptom intensity.

DISCUSSION

Despite the location of these patients in primary care, they appeared to have rates of Axis I psychiatric comorbidity similar to those seen in some psychiatric settings and similarly significant disabling effects of their panic in terms of perceived lost work days or productivity, consistent with other studies.[3] Although rates of comorbidity and disability varied between sites, possibly owing to provider specialty (general internal medicine vs. family practice) or payer mix (public sector/Medicaid vs. fee for service), this variation was not statistically significant.

These findings document the increased rate of emergency room and outpatient medical visits in patients with panic disorder compared with patients without a current psychiatric diagnosis seen in the primary care setting. While these results are consistent with those from the community setting,[45] control patients in the primary care setting are likely to have more service use than controls in the community. Hence, the fact that patients with panic disorder use more medical services than other primary care patients without a psychiatric illness highlights the critical importance of providing adequate treatment of panic in this setting. The increased service use is not due to accompanying depression or other medical illness and appears to be entirely attributable to panic. Our failure to find the increased use of hospital services found in community studies[22] may be because our control group was more medically ill than community samples in general and so less likely to differ from panic patients. However, the greater managed care penetration in both Seattle and San Diego, compared with San Antonio where the Katerndahl and Realini study[22] was done, may also account for the difference (i.e., greater restriction on hospitalization in general).

Overall, the higher rate of current mental health treatment among our panic patients is consistent with recently published data from a community sample.[7] Nonetheless,

it is noteworthy that almost half still did not receive mental health treatment, and a much smaller proportion were receiving adequate treatment, whether pharmacotherapy or cognitive-behavioral therapy. Although we only surveyed a subgroup of our original panic cohort, and the sample size (N = 41) is relatively small, it is impressive that inadequate doses or types of medication and/or nonspecific supportive psychotherapy were often used to address these patients' difficulties. Similar findings have been reported with primary care patients with major depression.[46] Data on treatment received by panic patients in primary care are extremely limited. As mentioned earlier, one study provides figures for a mixed group of anxious patients (5%–24% received any medication, not necessarily adequate), but does not provide figures for the panic patients themselves.[30] Other figures are not published but suggest that use of any medication (again not necessarily adequate) varies widely from 20% (D. A. Katerndahl, M.D., oral communication, June 20, 1998) to 58% (D. J. Katzelnick, M.D., oral communication, June 15, 1998). This is consistent with published data on the use of pharmacotherapy for depression in primary care, which reports rates of antidepressant use from 16% to 63% (median = 57%).[46–52]

The low use of SSRIs in this population is noteworthy, since these medications are now generally seen as the first-line treatment of choice for panic.[43] However, many patients taking tricyclic antidepressants were taking small bedtime doses (e.g., 50 mg of amitriptyline) suggesting that they were prescribed for reasons such as sleep rather than for panic. It is also possible that managed care and/or payer constraints contribute to the low rate of SSRI use.

This study is limited by the bias inherent in a convenience sample and the lack of data on interviewer reliability, although the prevalence of panic in this setting is similar to the median figure from other studies and the associated comorbidity and disability provide further evidence of internal validity. In addition, the self-report measures of health care utilization have not yet been validated, although they are currently being used and validated in the large PORT study on depression. The strengths of our study include a relatively large sample of panic patients, use of 3 separate sites with geographic and ethnic diversity, and use of structured interviews and validated questionnaires. The findings highlight the importance of identifying and treating panic patients in the primary care setting in order to decrease disability and potentially unnecessary medical service use. Future studies need to test innovative methods for improving the care of patients with panic disorder in the primary care setting by utilizing collaborative strategies that have recently been effective in treating depression in this setting.[48] We have such a study, recently funded by the National Institute of Mental Health, now under way in San Diego and Los Angeles, California, and Seattle, Washington.

Drug names: alprazolam (Xanax), amitriptyline (Elavil and others), bupropion (Wellbutrin), nefazodone (Serzone), sertraline (Zoloft), trazodone (Desyrel and others), venlafaxine (Effexor).

Disclosure of off-label usage: The authors of this article have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents has been presented herein that is outside Food and Drug Administration–approved labeling.

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Instructions

Psychiatrists may receive 1 hour of Category 1 credit toward the American Medical Association Physician's Recognition Award by reading the article starting on page 492 and correctly answering at least 70% of the questions in the posttest that follows.

1. Read each question carefully and circle the correct corresponding answer on the Registration form.
2. Type or print your full name and address and Social Security, phone, and fax numbers in the spaces provided.
3. Mail the Registration form along with a check, money order, or credit card payment in the amount of $10 to: Physicians Postgraduate Press, Office of CME, P.O. Box 752870, Memphis, TN 38175-2870.
4. For credit to be received, answers must be postmarked by the deadline shown on the CME Registration form. After that date, correct answers to the posttest will be printed in the next issue of the *Journal*.

All replies and results are confidential. Answer sheets, once graded, will not be returned. Unanswered questions will be considered incorrect and so scored. Your exact score can be ascertained by comparing your answers with the correct answers to the posttest, which will be printed in the *Journal* issue after the submission deadline. The Physicians Postgraduate Press Office of Continuing Medical Education will keep only a record of participation, which indicates the completion of the activity and the designated number of Category 1 credit hours that have been awarded.

1. The prevalence of panic disorder in the adult population is:
a. 2%–3%
b. 6%–7%
c. 10%–12%
d. 15%–17%

2. The proportion of panic disorder patients using primary care to obtain mental health services is:
a. 20%
b. 40%
c. 55%
d. 70%

3. The prevalence of panic disorder in the primary care medical setting is:
a. 4%–6%
b. 8%–10%
c. 14%–16%
d. 25%–30%

4. Primary care patients with panic disorder have all of the following *except:*
a. More days in which they are unable to carry out their normal activity due to emotional problems
b. More days where they have had to cut down on their usual activities due to emotional problems
c. More nights hospitalized for physical problems
d. More trips to the emergency room

5. Which of the following comorbid conditions occurs in fewer than 1 in 4 primary care patients with panic disorder?
a. Major depression
b. PTSD
c. Social phobia
d. Generalized anxiety disorder

6. Which of the following medical conditions occurs at a higher rate in patients with panic disorder in primary care?
a. Epilepsy
b. Hypertension
c. Cancer
d. Coronary artery disease

7. What proportion of patients with panic disorder in primary care customarily receive medications?
a. 20%
b. 40%
c. 60%
d. 80%

8. What proportion of patients in primary care commonly recover from their panic with usual care over a 6- to 12-month period?
a. 20%
b. 40%
c. 60%
d. 80%

Answers to the January 1999 CME posttest

1. b 2. d 3. a 4. b 5. c 6. d 7. a

Circle the one correct answer for each question.

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
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7.	a	b	c	d
8.	a	b	c	d

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4. Did the method of presentation hold your interest and make the material easy to understand? ❑ Yes ❑ No
5. Achievement of educational objectives:
   A. Enabled me to outline the comorbidity and panic characteristics for patients with panic disorder. ❑ Yes ❑ No
   B. Enabled me to recognize increased medical service utilization in panic patients relative to other primary care patients. ❑ Yes ❑ No
   C. Enabled me to characterize the nature of the usual care for panic patients presenting in primary care environments and document the outcomes of treatment. ❑ Yes ❑ No
6. Did this CME activity provide a balanced, scientifically rigorous presentation of therapeutic options related to the topic, without commercial bias? ❑ Yes ❑ No
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