Understanding and Treating Panic Disorder in the Primary Care Setting

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According to studies, the median prevalence of panic disorder in the primary care setting is 4%. Rates are higher among certain patient populations, such as those with cardiac (20% to 50%) or gastrointestinal presentations (28% to 40%). Consequently, patients with panic disorder are high utilizers of medical services and are heavily represented among patients classified as high health care utilizers, compared with other psychiatric or non-psychiatric groups. Despite its frequency in the primary care setting, panic disorder is significantly under-recognized by medical providers. Corresponding with inadequate recognition is the substantial proportion of these patients who fail to receive appropriate treatment (pharmacotherapy and psychotherapy). Most experts have concluded that panic disorder is poorly managed in the primary care setting because of the process of care and patient engagement. In terms of process of care, primary care practice still operates on an acute disease model (leaving no time for initial patient education or follow-up), which is a poor fit for the management of chronic diseases. Insufficient patient engagement in treatment (i.e., being involved in the treatment process, "buying into" rationale for treatment, and being willing to collaborate with clinician and adhere to recommendations) is the second important contributor to inadequate treatment. Use of a chronic disease self-management approach would enhance treatment of panic disorder. This model requires that patients, in collaboration with the health care provider/system, take day-to-day responsibility for managing their illness by doing 3 things: adhering to recommended medical management, adopting improved health habits/coping skills, and assisting in ongoing monitoring of illness status/change. Future approaches to treating panic disorder in primary care would be enhanced by including assessments of patient beliefs and preferences, spending more time in preparing the patient for treatment, utilizing a simple pharmacotherapy algorithm, utilizing simple rating scales to monitor outcomes, and training providers in brief CBT interventions.

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Although 2 decades of research have explored the impact and treatment of depressive disorders in the primary care setting, only recently has attention shifted to the anxiety disorders. This neglect is striking, given the high prevalence of anxiety disorders among primary care patients and the high likelihood that such patients will receive unnecessary and costly medical procedures. The majority of studies to date have focused on the assessment and treatment of panic disorder, as this is one of the most disabling and costly of the anxiety disorders and of particular concern to health care providers. In this article we will focus on the prevalence and nature of panic disorder in primary care settings, factors related to poor recognition and treatment of panic disorder by primary care physicians, and additional contributors to inadequate treatment of panic disorder in this setting. We will conclude with practical recommendations for improving the care of panic disorder in primary care settings by use of chronic disease management models that include care managers or physician extenders.

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PREVALENCE AND NATURE OF PANIC DISORDER IN PRIMARY CARE

According to the National Comorbidity Survey, the rate of panic disorder in the general population is approximately 1.5%.[1] To date, 8 studies, each with sample sizes of more than 1000 patients, have reported data on the prevalence of panic disorder in the primary care setting.[2–9] Because the majority of these studies report rates either from

a single point in time or over a 1-month period, comparable 12-month rates would obviously be higher. The median prevalence from these 8 studies is approximately 4%, indicating that, with adjustment for the 2 time frames between the community and primary care studies, a likely 3-fold increase of panic disorder among primary care patients exists.

Rates of panic disorder are even higher among certain patient populations. Patients with panic disorder typically present to primary care settings with specific somatic complaints.[10] A number of studies have examined rates of panic among patients with cardiac or gastrointestinal presentation in the general medical setting, in part because of the high cost of medical workup for these conditions. In a sample of patients with chest pain, who subsequently were determined to have normal coronary angiographies, Kane et al.[11] reported rates of panic disorder close to 20%. Wulsin et al.[10] showed that more than 30% of individuals presenting to an emergency room with atypical chest pain had panic disorder. Likewise, Logue et al.[12] found rates of panic disorder of almost 50% among patients seeking cardiologic evaluation from specialists. Elevated rates of panic have also been found among patients with irritable bowel syndrome (IBS). Among a sample of specialist-diagnosed IBS patients, Walker et al.[13] reported that 28% had panic disorder in their lifetime, and 10% met criteria for current panic disorder. Lydiard et al.[14] reported somewhat higher rates of panic in a cohort of IBS patients with a 40% lifetime rate and a 22% current rate.

Not surprisingly, studies have shown that patients with panic disorder are high utilizers of medical services. In community samples, patients with panic disorder have been found to use primary care services at 3 times the rate of other diagnostic groups.[15] Epidemiologic studies[16–19] indicate that panic disorder patients are likely to have 6 or more visits to general medical services and be heavily represented among patients classified as high health care utilizers, compared with other psychiatric or nonpsychiatric groups.

Roy-Byrne and colleagues conducted one of the few studies of health care utilization among panic patients within a primary care setting.[20] Eighty-one patients diagnosed with panic disorder were compared with 183 patients with no psychiatric disorder (both groups had multiple medical diagnoses, but the rates did not differ between groups). A significantly higher proportion of panic patients had made a recent visit to the emergency room (46% vs. 27%) and had made at least 6 outpatient visits to their physician in the last year (32% vs. 16%) compared with the nonpsychiatric group. In addition, the panic patients showed greater rates of disability, as measured by the presence of at least 1 day in which they were unable to carry out their usual activities (59% vs. 28%), as well as the number of days they had to cut down on their normal activities (67% vs. 46%).

Patients with panic disorder may present challenges to health care providers even beyond what can be accounted for by high utilization of services alone. In an interesting study, Lin et al.[21] examined patients who were high utilizers of medical care presenting to primary care setting by dividing them according to how frustrating they were for their primary care physicians. The sample as a whole was diagnostically and characterologically heterogeneous. Among the "frustrating" group, panic disorder and generalized anxiety disorder were the most common psychiatric diagnoses, while among the "nonfrustrating" group, the rates of these 2 disorders were considerably lower. In contrast, the rates of major depression in both the frustrating and nonfrustrating groups were fairly close to one another.[21]

RECOGNITION AND TREATMENT OF PANIC IN PRIMARY CARE

Despite the frequency with which panic patients present to primary care settings, panic disorder is significantly under-recognized by medical providers.[22–26] This seems related to a generalized tendency of physicians to fail to recognize anxiety disorders. Using a large cohort of primary care patients with a range of psychiatric diagnoses, Ormel et al.[27] report a clear discrepancy between physicians' ability to identify patients with pure anxiety, pure depression, or the combination of both. Here, only 20% of anxious patients were recognized by their physicians as opposed to 50% of patients with depression and 60% of patients with both disorders. Corresponding with inadequate recognition of panic disorder (and anxiety disorder more generally) is the substantial proportion of individuals who fail to receive appropriate treatment. In a large community survey,[28] only 17% of those diagnosed with probable panic disorder or generalized anxiety disorder received adequate pharmacotherapy and only 9% received appropriate psychotherapy. As more than 75% of U.S. patients who receive psychiatric treatment do so in the primary care setting, these data can be used as a proxy for treatment received in primary care.[28]

Only a small number of studies have examined adequate treatment of panic disorder among primary care patients directly. In a large sample of mixed panic and anxiety patients in a primary care setting, Meredith and colleagues[29] reported that 20% to 30% of patients with comorbid anxiety disorders (a mixed group of panic disorder and generalized anxiety disorder) received adequate treatment (loosely defined as some anxiolytic medication or low-level counseling). Examining patients with panic disorder specifically in a primary care setting, Roy-Byrne and colleagues[20] reported that 22% received adequate pharmacotherapy and 12% received psychotherapy that included at least some cognitive-behavioral therapy (CBT) elements (considered efficacious psycho-

therapy for panic disorder). In another cohort, Roy-Byrne et al.[30] found similar rates—25% received appropriate medication treatment (i.e., correct dose and type) and 15% received appropriate psychotherapy treatment with CBT elements.

In conclusion, research to date indicates the vast majority of patients receive insufficient treatment for panic disorder within primary care settings. The reasons for this are likely varied and include much more than insufficient knowledge about treatment on the part of the primary care physician. In the next section, we will explore possible reasons panic patients fail to receive appropriate treatment, with a particular focus on the care process and the patient's ability to engage in treatment.

REASONS FOR LOW RATES OF ADEQUATE TREATMENT FOR PANIC IN PRIMARY CARE

Perhaps the best evidence to suggest that physician knowledge about depression and anxiety is not a major contributor to the poor receipt of treatment and the poor outcome of such patients comes from studies that have shown that improving physician recognition of depression does little to improve patient outcome.[31] Indeed, it is the consensus of most experts that psychiatric illness, including panic disorder, is poorly managed in primary care settings due to 2 major factors: process of care and patient engagement.

In terms of process of care, primary care practice is still operating on an acute disease model, which has repeatedly been shown to be a poor fit for the management of chronic diseases.[32] The acute disease model of primary care leaves no time for initial patient education or the follow-up of patients, in order to monitor their adherence to recommended medical management and to measure the outcome of this management. In part, this problem is related to an excessive reliance on physicians who have little time for this type of continuity of care. Indeed, the adequate treatment of panic disorder would require several appointments, since medication would need to be started at a low dose and gradually increased as the patient becomes tolerant to side effects. Similarly, while the minimal number of CBT sessions required for successful treatment of panic disorder has yet to be determined, even cursory coverage of the major components of treatment would require several appointments and ongoing monitoring.

A different approach to care being utilized at an increasing rate incorporates care managers or physician extenders to support patient behavior change. Initially, these adjunctive providers were included for the management of chronic illnesses (e.g., diabetes with diabetes nurse-specialists), and, more recently, similar models have been shown to work well with depression.[33–35] As described further below, this approach appears well suited for the needs of patients with panic disorder as well.

A second important contributor to inadequate treatment of panic disorder is insufficient patient engagement in treatment (i.e., being involved in the treatment process, "buying into" the rationale for treatment, and wanting to collaborate with the clinician and adhere to recommendations). While patient engagement is partly influenced by continuity of care as described above, it is likely affected by additional factors, including patients' level of awareness and the types of beliefs they hold (about anxiety, panic, and treatment), their treatment preferences and the match between their preferences and the treatments offered, the degree to which patients believe mental disorders and treatment seeking are stigmatizing, and their overall readiness for change (which can in turn be influenced by a number of factors including personal and social resources).

Recent research provides support for the relevance of these factors to patient engagement and treatment outcomes. Mojtabai and colleagues[36] published the interesting finding that anxiety disorder patients have a dramatically lower perceived need for treatment and for seeking help than patients with mood disorders. In their sample, only 20% of patients with anxiety disorders perceived the need for treatment, which was much closer to the low rate of perceived need for treatment of substance abusers (13%); in contrast, 50% of mood disorder patients perceived the need for treatment. The reasons for the low perceived need for treatment among anxiety patients are likely related to beliefs, attitudes, and knowledge about anxiety disorders and treatment, although this has not been well studied.

Attitudes and beliefs have been studied in relation to treatment outcome. Roy-Byrne and Cowley[37] report that nonadherence to medication for the treatment of panic disorder was predicted by specific patient beliefs, including fear of medication dependence and beliefs related to prior personal and familial medication experiences. Further, in a collaborative treatment outcome study for panic[38] (which provided CBT, medication, both, or neither), dropout was in part predicted by pessimistic treatment attitudes and attribution of panic to external stress. This attribution of panic to external stress is an interesting finding that may distinguish patients with panic from other psychiatric groups and may therefore explain the findings of Mojtabai and colleagues.[36] These so-called normalizing attitudes may lead to the conclusion that when life stress decreases, the panic will go away, and therefore treatment is not necessary. However, given the chronicity of panic disorder, this conclusion is not accurate. Addressing these beliefs is thus crucial to increasing patient engagement in treatment.

Treatment preferences and the match between patients' preference and treatment type have also been related to engagement and outcome. In the collaborative panic

treatment study just mentioned,[38] treatment preference predicted treatment initiation; specifically, the strongest predictor of refusal to engage in treatment was an unwillingness to take medication and a preference for psychotherapy. Similarly, in our recent study[39] comparing the combination of CBT and medication to usual care among a large sample of primary care patients with panic disorder, preference for psychotherapy predicted the number of CBT sessions attended. These findings are consistent with those from studies of treatment among depressed patients, which have shown that patients who are not offered the treatment they prefer are less likely to enter treatment or complete treatment compared with patients who are matched with their treatment of choice.[40,41] Therefore, assessing patient preferences and maximizing the match between patient preferences and treatment type may be an additional means of increasing patient engagement in treatment.

Although not well studied in patients with panic disorder and among those who present to primary care clinics specifically, additional factors that may influence engagement include the degree to which patients view panic disorder and help-seeking as stigmatizing, and their readiness to change. For example, some research has shown that ethnic minorities view seeking treatment for mental health problems as more stigmatizing and have less trust in health care professionals overall compared with nonminorities.[42,43] This suggests that some patient populations, such as ethnic minorities, may be less likely to pursue treatment for psychiatric problems within primary care settings.

Further, a wide body of research links level of readiness to change with treatment engagement across patient populations and settings.[44] Although little research exists linking readiness to change with outcome for panic treatment, one recent study[45] provides support for the notion that factors that can affect readiness for change predict outcome. We recently examined factors related to treatment outcome among panic patients in a primary care setting and, after controlling for the receipt of adequate pharmacotherapy, the following predicted poor responses: low income, unemployment, minority status, medical illness severity, physical disability, severity of phobia, and number of emergency room visits.[45] All of these factors reflect situations and circumstances that can interfere with readiness to change. Again, patient engagement may be improved by taking these factors into account.

RECENT APPROACHES TO IMPROVING CARE FOR PANIC DISORDER IN THE PRIMARY CARE SETTING

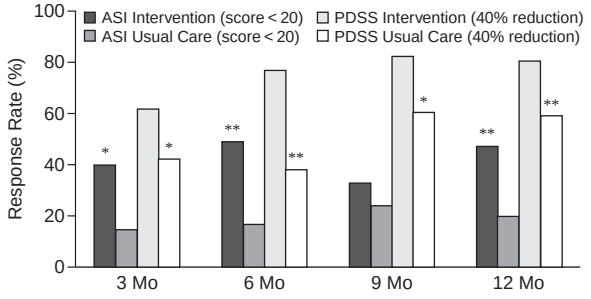
We propose the utilization of the chronic disease self-management approach for enhancing the treatment of panic disorder within primary care settings. The chronic disease self-management approach is a patient-centered approach that has been well described.[46] Rudimentarily, it requires that patients, in collaboration with the health care provider/system, take day-to-day responsibility for managing their illness by doing 3 things: (1) effectively incorporating adherence to recommended medical management, (2) adopting improved health habits and coping skills, and (3) assisting in the ongoing monitoring of illness status and changes. Care managers or physician extenders can be particularly helpful in achieving these goals.

We tested a version of this approach, modeled after Dr. Wayne Katon's collaborative care treatment for depression in primary care,[35] in a recent study of panic disorder treatment in primary care settings.[30] One hundred fifteen panic patients at 3 clinics in Seattle, Wash., were randomly assigned to a disease management intervention or usual care by the primary care physician.[30] This disease management intervention consisted of the prescription of a selective serotonin reuptake inhibitor (SSRI) plus 2 psychiatrist visits at weeks 1 and 4 followed up by 4 to 6 phone calls over the next year by the psychiatrist. The use of a psychiatrist in this study rather than a less expensive care manager was intended to determine the feasibility and effectiveness of this approach for future studies. The results of this study showed significant differences in anxiety outcomes between intervention and usual care at 6 months and 12 months (with trends noted at 3 and 9 months, respectively). These increases in improved outcome (Figure 1) were accompanied by a higher quality of pharmacotherapeutic care observed at the 3- and 6-month assessments, but not the 9- and 12-month assessments. Most importantly, this intervention was shown to be incrementally cost effective by Katon et al.[47] with the intervention actually producing a cost offset when other medical costs were included (Table 1).

A second study[39] has recently been completed in which 232 patients with panic disorder were randomly assigned to intervention or care as usual by the primary care physician, across 6 primary care clinics in 3 West Coast cities.[48,49] This time the intervention was a combination of CBT and pharmacotherapy. A master's-level care manager with no CBT experience was trained to deliver the CBT and to assist the primary care physician by relaying advice from a psychiatrist (who met with the care manager weekly to review the patient's progress and status).[39]

Finally, Rollman et al.[50,51] recently presented data from a telephone-based case manager intervention for panic and generalized anxiety disorder (GAD), which also provided intervention patients with CBT workbooks for panic or GAD. Intervention patients had significantly greater improvement in anxiety symptoms on the Panic Disorder Severity Scale (PDSS), as well as in employment and work outcomes.[50,51]

Figure 1. Pharmacotherapy Response and Remission of Panic Disorder in the Primary Care Setting[a]



[a]Data from Roy-Byrne et al.[30] Partial response was defined as a 40% reduction in PDSS score; recovery was defined as an ASI score less than 20.
*p = .10.
**p = .05.
Abbreviations: ASI = Anxiety Sensitivity Index, PDSS = Panic Disorder Severity Scale.

Table 1. Incremental Cost-Effectiveness of an Intervention for Panic Disorder[a]

Type of Cost	Incremental Cost (95% CI)	Cost per Additional Anxiety-Free Day (95% CI)
Total outpatient mental health costs, $[b]	205 (–135 to 501)	3 (–2 to 11)
Total outpatient costs, $[c]	–325 (–1460 to 448)	–4 (–23 to 14)

[a]Reprinted with permission from Katon et al.[47] Intervention consisted of prescription of a selective serotonin reuptake inhibitor plus 2 psychiatrist visits at weeks 1 and 4 followed up by 4 to 6 phone calls over the next year by the psychiatrist.
[b]Includes psychiatric medications, intervention visits, and mental health visits.
[c]Includes total outpatient mental health costs and total non–mental health outpatient costs.

PRACTICAL SUGGESTIONS FOR PRIMARY CARE PANIC DISORDER MANAGEMENT

We assert that future approaches to treating panic disorder in primary care would be enhanced by including an assessment of patient beliefs and preferences, spending more time in preparing the patient for treatment ("preparatory techniques"), utilizing a simple pharmacotherapy algorithm with clear-cut steps, utilizing simple rating scales to monitor outcomes, and training providers in brief CBT interventions (including physician extenders, behavioral health specialists, or even primary care physicians).

Preparatory techniques for primary care panic disorder are discussed now in detail. First, patients are provided an explanation of the disorder that focuses on brain homeostasis and the nature/nurture interaction (i.e., this is a disorder in which people have a genetic biological temperamental predisposition that probably contributes 30% to 50% of the vulnerability, but it has to be triggered by stress and facilitated and enabled by problematic cognitive and coping abilities); this is critical to countering lack of knowledge and/or misinformation and for increasing openness to both pharmacologic and psychosocial interventions. Second, strengths and weaknesses of both pharmacotherapy and psychotherapy modalities should then be reviewed with a strong emphasis on the efficacy of both. Motivational interviewing techniques may be particularly helpful toward assessing and increasing patient preferences and readiness for change. Specific to panic disorder would be a discussion of how panic is currently affecting the patient's life (including both negative impacts as well as potential positive aspects to the disorder or to not changing, e.g., avoidance of normally expected chores, work, or relationships). Finally, treatment may be aided by including an exploration of potential psychological and logistical barriers to specific treatments and problem-solving these barriers. This process might include discussing and normalizing panic and treatment (to counter beliefs that the disorder and treatment are stigmatizing), assessing and problem-solving coexisting life problems that make engagement in treatment difficult, providing phone follow-up sessions (particularly relevant for CBT interventions), and considering lower-cost alternatives, such as generic medications.

The algorithm of pharmacotherapy for treatment of panic disorder in primary care has been recently reviewed and updated (P.R.-B.; M. B. Stein, M.D., M.P.H., unpublished data, Nov. 2004).[52] In brief, an SSRI is started at a low dose, gradually titrated, and raised to an adequate antidepressant dose over the first 4 weeks. Low doses can be increased to moderate doses after the first week if well tolerated (i.e., paroxetine 10–20 mg, sertraline 25–50 mg, fluoxetine 5–10 mg, citalopram 10–20 mg, escitalopram 5–10 mg). Partial responders (i.e., those that improve at least 50%) after 12 weeks should receive augmentation with a benzodiazepine or with CBT. Nonresponders should get a second SSRI or serotonin-norepinephrine reuptake inhibitor (e.g., venlafaxine). At the 6-month period, persistent cases should be considered for augmentation with atypical neuroleptics (i.e., risperidone 1–2 mg, olanzapine 5–10 mg, quetiapine 25–50 mg) or additional CBT targeted toward comorbid disorders. Use of anticonvulsants as an augmenting single agent would also be a consideration, in particular, lamotrigine, gabapentin, or tiagabine.

Finally, nonpharmacologic interventions (specifically, CBT) by the primary care physician or care extenders should be considered. The primary care physician can certainly provide some psychoeducation (as mentioned previously under preparatory techniques) and can also do some minimal CBT, such as providing guidance on ways to correct cognitive distortions and encouraging individuals to practice exposure to feared internal bodily sensations and avoided situations. Care extenders, such as behavioral health specialists, can also be used to augment the primary

care physician interventions. In many settings, behavioral health specialists have been added to primary care practices for exactly this type of role.[53] Given that in our recent study[39] significant improvements were obtained with 6 or fewer CBT sessions and follow-up phone contacts, the effective treatment of panic disorder appears highly achievable in primary care settings.

In conclusion, as primary health care clinics increasingly provide mental health treatment to a significant proportion of the population, it is imperative that effective treatments are developed and utilized in these settings. Promising approaches currently exist for the treatment and management of depressive disorders, and recent data support the treatment of panic in this setting as well. This article provides an overview of the key issues facing the implementation of any psychiatric intervention in this setting with specific recommendations for the treatment of panic disorder. Although change in general practice can be difficult, often requiring an initial increase in effort and resources, it is our strong conviction that adequate care of psychiatric conditions in primary care settings will offset many of the complications and unnecessary medical interventions that ensue when these conditions are not treated (as is the case with panic disorder patients). Further, effective psychiatric treatment in these settings will provide care to individuals from disadvantaged groups who would typically not have access to such treatment, thus having a broader impact on the larger community. Future research is critically needed to refine these approaches and demonstrate the feasibility and utility of psychiatric treatment in primary care for additional anxiety disorders as well as the full range of psychiatric disorders.

Drug names: citalopram (Celexa and others), escitalopram (Lexapro), fluoxetine (Prozac and others), gabapentin (Neurontin and others), lamotrigine (Lamictal), olanzapine (Zyprexa), paroxetine (Paxil and others), quetiapine (Seroquel), risperidone (Risperdal), sertraline (Zoloft), tiagabine (Gabitril), venlafaxine (Effexor).

Disclosure of off-label usage: The authors have determined that, to the best of their knowledge, citalopram, escitalopram, fluoxetine, gabapentin, lamotrigine, olanzapine, quetiapine, risperidone, tiagabine, and venlafaxine are not approved by the U.S. Food and Drug Administration for the treatment of panic disorder.

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