Identifying Psychiatrists’ Practice Patterns When Managing Depression in Patients With Bipolar I Disorder: A Descriptive Study to Inform Education Needs

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Abstract

Objective: The purpose of this study was to describe practice patterns of US psychiatrists with regard to the diagnosis and management of depression in adults with bipolar I disorder and to identify relevant gaps in clinical knowledge and competence. Methods: Two focus groups were conducted using nominal group technique via a web interface and teleconference to elicit barriers that psychiatrists face in managing depression in patients with bipolar I disorder. These results framed a case-based survey that was administered to 200 US-based psychiatrists to explore and quantitatively assess their knowledge and practice patterns with respect to the diagnosis and management of depression in patients with bipolar I disorder. We completed all statistical analyses with PASW Statistics 18 and used descriptive statistics to summarize survey responses. Results: To identify previously undiagnosed mania, 67% of clinician respondents said that they asked depressed patients if they had previously experienced all Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision mania-defining symptoms. To treat a patient with symptoms of depression and no other risk factors for bipolar I disorder, 85% of the respondents said that they would use an antidepressant; 55% of respondents were not concerned that their choice of treatment would lead to a manic episode; 5% thought that there was no greater risk of treatment-emergent mood disorder when treating depression in patients with bipolar I disorder compared with major depressive disorder. If the patient had depression and risk factors for bipolar I disorder, 54% of the respondents said that they would still prescribe an antidepressant as monotherapy. Conclusion: The clinician responses were not adherent to evidence-based practice based on clinical trial results or current guideline recommendations. There is an unmet need for education to enable psychiatrists to differentiate between unipolar and bipolar depression, to identify the risk of treatment-emergent mood disorders with the use of antidepressants, and to effectively manage patients at risk for bipolar I disorder.

Keywords: depression; bipolar disorder; practice patterns; psychiatrist; survey

Introduction

The majority of individuals (82%) affected by bipolar disorder are classified as having a severe form of the disorder.1 Bipolar I disorder has an average age of onset of 25 years and is characterized by moods that swing from elated or anxious manic states to severe depression; abnormal mood episodes may simultaneously demonstrate features of both emotional states (mixed episode). Although mania is the hallmark of bipolar I disorder, depressive symptoms account for the larger share of illness burden for most patients, and the depression associated with bipolar disorder is considered more
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difficult to treat than unipolar depression. Indeed, people with bipolar disorder spend more time in depressive states, as opposed to mania or hypomania, and social and occupational dysfunction in bipolar disorder are more specifically related to depression. Additionally, people with bipolar disorder are 2 to 3 times more likely to seek treatment for depression than for manic symptoms. Although efficacious treatments have been available for bipolar I disorder for decades, only approximately 50% of affected individuals in the United States receive treatment during a 12-month period, and approximately 40% of those receiving therapy receive only “minimally adequate” care. Thus, at any given time, no more than one-third of people with bipolar disorder are receiving fully adequate medical treatment.

Many adults with bipolar disorder report that they were initially misdiagnosed. Misdiagnosis rates in Europe and in the United States are estimated to be between 30% to 69%, and nearly one-third are not correctly diagnosed until 10 years after their initial presentation. The most common initial diagnosis is unipolar depression (or major depressive disorder [MDD]). In some cases, such misdiagnosis is unavoidable; bipolar disorder cannot be diagnosed until an individual has experienced a manic (bipolar I) or hypomanic (bipolar II) episode. Nevertheless, the failure to obtain a history of mood swings or other potential indicators of bipolarity in a depressed person can have serious consequences, as antidepressants can cause treatment-emergent affective switches and can induce rapid cycling in bipolar individuals who are not taking mood-stabilizing medications.

There are few accepted diagnostic criteria to differentiate between unipolar and bipolar depression, as well as few pathognomonic differentiating characteristics. In addition, there is limited diagnostic guidance in the mood disorders section of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) to help clinicians assess patients with fluctuating and complex mood states, especially when they present with mixed episodes. Although clinical practice guidelines have been developed by organizations such as the International Society for Bipolar Disorders Diagnostic Guidelines Task Force (ISBPDDGTF) and the World Federation of Societies of Biological Psychiatry (WFSBP), the only US-specific guidelines for the diagnosis and management of bipolar disorder in adults published in the past 5 years are included in Management of Bipolar Disorder in Adults, published in 2010 by the Department of Veterans Affairs in conjunction with the Department of Defense. By contrast, publication of the American Psychiatric Association Practice Guidelines for adults has been delayed indefinitely, and according to the American Psychiatric Association’s website, the last edition, published in 2002, “…can no longer be assumed to be current.”

Despite documented uncertainties and lack of clarity in guideline recommendations concerning the diagnosis and management of patients with bipolar I disorder who present with depressive symptoms, there are few published studies that address the practice patterns, knowledge, attitudes, and beliefs of US psychiatrists as they relate to these issues. Therefore, the purpose of this study was to describe the current knowledge and practice patterns of US psychiatrists and to identify gaps in knowledge and competence concerning the diagnosis and management of depression in patients with bipolar I disorder. Findings from this study will inform clinicians about current practice patterns and emerging data concerning the diagnosis and treatment of depression in patients with bipolar I disorder. This information may define unmet medical educational needs upon which educational activities may be developed.

Methods

Formative Research

We initially conducted 2 teleconference focus groups using nominal group technique to elicit barriers that psychiatrists face in managing depression in adults with bipolar disorder. Two groups of 7 to 8 US practicing psychiatrists who see ≥ 50 patients per week, with ≥ 5% of their patient population having bipolar I disorder, participated in 1-hour, synchronous meetings on January 25, 2012, conducted by a health research moderator. Each focus group was structured around the following steps: 1) silent generation of responses to the question, “What barriers do psychiatrists face in optimally managing depression in patients with bipolar disorder?”, 2) round-robin recording of responses; 3) serial discussion for clarification; and 4) prioritization of responses. Participants dialed into a teleconference line and accessed an Internet site where they were connected to a virtual meeting. To promote open disclosure, participants were initially asked to state a single response to a question without rationale, justification, or explanation for the response. Subsequently, respondents were asked to identify, from the list of responses generated by the group, 3 barriers that he or she personally considered to be most important. Finally, each participant ranked the attributes that he or she selected in order of their relative importance. The results
were used to frame the case-based survey instrument that we developed in conjunction with clinical experts.

Case-Based Survey
We developed a case-based survey instrument to explore and quantitatively assess knowledge and practice patterns of US-based psychiatrists who diagnose bipolar I disorder in patients presenting with depression and who manage depression in patients with bipolar I disorder. We assessed the validity and relevancy of the items included in the survey instrument via pilot testing with 2 US-practicing psychiatrists. The methodology of using questions centered on case vignettes has been shown to be an efficient and cost-effective method for measuring physicians' clinical decision making.\textsuperscript{11,12} The survey comprised 2 case vignettes to reflect symptomatic characteristics of unipolar depression and depression in patients with bipolar I disorder. Each case was accompanied by a series of questions to determine how physicians would suspect, diagnose, treat, manage, and monitor the patients described in the vignettes.

The first case concerned a 24-year-old man with a 6-week history of feeling sad and withdrawn and having trouble concentrating. He spoke slowly, seemed withdrawn, and had a flat affect, but exhibited no evidence of psychotic symptoms. A medical work-up, including a physical examination, laboratory tests, and drug screening, revealed no organic cause. He had had a similar episode 1 year ago that lasted 1 month. He denied substance abuse, drank only occasionally, and had consumed no alcohol since his mood changed. He had no family history of depression, bipolar disorder, or schizophrenia. He had never been diagnosed with mania and denied any episodes during which he experienced symptoms that might have indicated undiagnosed mania, even when specifically questioned about each possible symptom.

The second case involved an 18-year-old man with a history of a major depressive episode in high school who was being treated with a selective serotonin reuptake inhibitor (SSRI). He recently matriculated to a university away from home. During midterms, his hall advisor noticed erratic behavior, with the patient spending multiple late nights in the computer room, typing frantically, and having loud and pressured speech. These episodes resolved without the patient seeking medical attention. At the time of presentation (final examination time), he presented with excessive sleeping, no energy, and hopelessness about final examinations. There was no evidence of substance abuse or psychosis, and he had been taking his SSRI.

Data Collection and Analysis
We distributed the case-based survey to a random sample of 1149 US-practicing psychiatrists obtained from a proprietary database via email between March 29 and April 3, 2012. An online survey platform was used to collect the data. The online survey platform allowed for question branching and for responses to open-ended questions to be obtained. Respondents received a $50 honorarium for completion of the survey. We collected responses from the first 200 survey respondents that indicated that they manage both patients with depression and those with depression in bipolar I disorder. We completed all statistical analyses with PASW Statistics 18 (SPSS, Inc.). We used descriptive statistics to summarize survey responses.

Results
Participant Characteristics
A sample of 200 US-practicing psychiatrists completed the case-based survey (17.4% response rate). Table 1 describes the characteristics of the respondents. Psychiatrists included in this study saw an average of 71 patients per week. Of this patient group, an estimated 56% have a diagnosis of depression.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>N = 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male, %</td>
<td>75.5</td>
</tr>
<tr>
<td>Years since medical school graduation, mean</td>
<td>29</td>
</tr>
<tr>
<td>Attended medical school in the United States, %</td>
<td>69.5</td>
</tr>
<tr>
<td>Patients seen weekly, n, mean</td>
<td>71</td>
</tr>
<tr>
<td>Patients with depression seen weekly, n, mean</td>
<td>40</td>
</tr>
<tr>
<td>Patients with depression in bipolar I disorder seen weekly, n, mean</td>
<td>19</td>
</tr>
<tr>
<td>Practice location</td>
<td></td>
</tr>
<tr>
<td>Urban</td>
<td>39.0</td>
</tr>
<tr>
<td>Suburban</td>
<td>46.5</td>
</tr>
<tr>
<td>Rural</td>
<td>14.5</td>
</tr>
<tr>
<td>Present employment</td>
<td></td>
</tr>
<tr>
<td>Solo practice</td>
<td>34.0</td>
</tr>
<tr>
<td>Group practice</td>
<td>29.0</td>
</tr>
<tr>
<td>Medical school</td>
<td>2.0</td>
</tr>
<tr>
<td>HMO</td>
<td>1.0</td>
</tr>
<tr>
<td>Non-government hospital</td>
<td>6.0</td>
</tr>
<tr>
<td>Government</td>
<td>3.0</td>
</tr>
<tr>
<td>Community mental health center</td>
<td>22.0</td>
</tr>
<tr>
<td>State psychiatric hospital</td>
<td>3.0</td>
</tr>
<tr>
<td>Major professional activity</td>
<td></td>
</tr>
<tr>
<td>Direct patient care activities</td>
<td>97.0</td>
</tr>
<tr>
<td>Administrative activities</td>
<td>1.5</td>
</tr>
<tr>
<td>Medical education</td>
<td>1.0</td>
</tr>
<tr>
<td>Medical research</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Abbreviation: HMO, health maintenance organization.
sion, and an estimated 27% have a diagnosis of depression in bipolar I disorder.

Diagnosis
Almost all (> 90%) psychiatrists would ask the diagnostic questions listed in Figure 1 during their initial interview with a patient. When queried as to how they would identify undiagnosed mania, 67% of psychiatrist respondents said that they would specifically inquire if the patient had previously experienced the 8 symptoms that define mania in the DSM-IV-TR.

Respondents were queried about the ways in which MDD and depression in bipolar I disorder differ. As a group, 61% of respondents were aware that the age of onset of depression in bipolar I disorder occurs earlier than that seen in patients with MDD. However, 25% believed that depression in bipolar I disorder had a unique pathology that differed from that of MDD; 10% thought that response to antidepressants was similar in both disorders; and 5% thought that there was no greater risk of treatment-emergent mania when treating depression in bipolar I disorder compared with MDD.

Initial Management
Initial management questions were intended to evaluate practice patterns and to see if practice patterns varied based on different clinical scenarios involving patients with depression. For an adult patient with symptoms of depression and no other clinical risk factors for bipolar I disorder (case 1), most psychiatrists would treat with an antidepressant (85%), with an additional 8% prescribing a mood stabilizer, and 5% using psychotherapy alone (Figure 2). When asked about their level of concern that their choice of treatment for this patient would lead to a manic episode, 55% of the respondents were not concerned about such an occurrence, while a large minority (41%) was somewhat concerned. Most (75%) respondents said that they would discuss the possibility of a manic episode with this patient.

When asked conceptually if they would change their choice of therapy if this patient had a family history of bipolar disorder, 55% of psychiatrists said that they would not change their selected therapeutic agent. However, when specifically asked how they would treat this patient if he had a family history of bipolar disorder, 39% selected a different class of agent, highlighting a discrepancy between how physicians are thinking about management and how they are addressing management clinically. For a patient presenting with depression and a family history of bipolar disorder, fewer respondents (only 54%) would use an antidepressant, with more prescribing a mood stabilizer (31%) or an atypical antipsychotic (9%), and only 3% said that they would psychotherapy alone (Figure 3). Thus, a family history of bipolar disorder influences psychiatrists’ initial choice of therapy.

In a different scenario, with a patient currently taking an antidepressant who presents with a depressive episode and has a history of an untreated manic episode (case 2), there was no clear consensus as to how to treat. The highest percentage of respondents (39%) would add a mood stabilizer or an atypical antipsychotic (23%) to the patient’s current SSRI regimen (Figure 4). An additional 19% of respondents

Figure 1. Percent of respondents who would ask about listed issues when initially assessing a patient presenting with symptoms of depression.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous depressive episodes</td>
<td>99%</td>
</tr>
<tr>
<td>Suicidal ideation</td>
<td>98%</td>
</tr>
<tr>
<td>Family history of depression</td>
<td>98%</td>
</tr>
<tr>
<td>Family history of bipolar disorder</td>
<td>95%</td>
</tr>
<tr>
<td>Polysubstance abuse</td>
<td>95%</td>
</tr>
<tr>
<td>Previous symptoms that might indicate undiagnosed mania</td>
<td>95%</td>
</tr>
<tr>
<td>Previously diagnosed manic episodes</td>
<td>92%</td>
</tr>
<tr>
<td>Other*</td>
<td>17%</td>
</tr>
</tbody>
</table>

*N = 200

*Includes stress/sleep patterns, medications, treatment history, homicidal ideation, and other medical conditions.
said that they would stop the patient’s antidepressant and start him on a mood-stabilizing drug. Most psychiatrists would not rely on antidepressant monotherapy to manage the patient’s mood disorder in case 2. However, 9% of respondents said that they would increase the dose of the patient’s antidepressant, and 3% said they would switch the patient to another antidepressant. Most (83%) psychiatrists said that they would be very likely to consider the patient’s input when setting therapeutic goals. Respondents defined treatment success for this case as when the patient becomes asymptomatic (46%), achieves persistent euthymia (35%), or returns to baseline functioning (22%).

Factors influencing choice of therapy were also examined. The most significant factors influencing choice of therapy for a patient who presented as compliant with his or her current antidepressant medication were related to the agent: therapeutic efficacy (24%), side effects (23%), and speed of effect (23%). However, when asked more generally about factors influencing choice of therapy for patients with depression in bipolar I disorder, a majority identified the patient’s ability to adhere to a prescribed regimen (82%) and the personal clinical experience of psychiatrists with a certain agent (81%) as very important factors (Figure 5).

Approximately half (53%) of the respondents identified clinical guidelines as very influential, and 41% believed that it was very important that an agent have an US Food and Drug Administration (FDA)-approved indication for the diagnosis. Clinical trial results were the least influential, with only 26% considering the results of recent clinical trials to be a very important factor in treatment selection. Consistent with this, only 28% of respondents were “very familiar” with the Systemic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) trial, and only a handful were familiar with either Bipolar Affective Disorder: Lithium/Anticonvulsant Evaluation (BALANCE), or the Stanley Foundation Bipolar Network trials.

The amount of time psychiatrists spent counseling patients who presented with depressive symptoms and were newly diagnosed with bipolar I disorder varied; 16% spent ≥20 minutes with their patients, and only 38% spent ≤40 minutes counseling patients newly diagnosed with bipolar I disorder.

### Ongoing Management

The frequency of follow-up visits was also investigated. Most (56%) psychiatrists claimed that they would have reevaluated the patient in the second case within a short timeframe, scheduling a follow-up visit within 1 week; and 37% of respondents would have scheduled a follow-up within 2 weeks after the patient’s initial visit. However, 5% would have waited 4 weeks before having the patient return. With respect to ongoing care beyond the first reevaluation, most psychiatrists would see the patient frequently until he was stable. In terms of follow-up, 32% of the psychiatrists said that they would see the patient weekly and 43% would see him every 2 weeks until they felt he was stable. However, 23% would only see the patient once per month until he was stable. When asked about the use of mood charts for ongoing
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**Figure 5.** Important factors in selecting a treatment regimen for patients with depression in bipolar I disorder.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Very important (8–10)</th>
<th>Somewhat important (4–7)</th>
<th>Not important (1–3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient’s ability to adhere to prescribed regimen</td>
<td>82%</td>
<td>20%</td>
<td>18%</td>
</tr>
<tr>
<td>Your clinical experience with certain agents</td>
<td>81%</td>
<td>39%</td>
<td>20%</td>
</tr>
<tr>
<td>Successful management of patient’s family member on particular agent</td>
<td>60%</td>
<td>46%</td>
<td>39%</td>
</tr>
<tr>
<td>Clinical guidelines</td>
<td>53%</td>
<td>44%</td>
<td>13%</td>
</tr>
<tr>
<td>Agent has an FDA-approved indication for this diagnosis</td>
<td>41%</td>
<td>13%</td>
<td>4%</td>
</tr>
<tr>
<td>Data from other clinical trials</td>
<td>26%</td>
<td>12%</td>
<td>63%</td>
</tr>
<tr>
<td>Data from STEP-BD</td>
<td>21%</td>
<td>25%</td>
<td>55%</td>
</tr>
</tbody>
</table>

Abbreviations: FDA, US Food and Drug Administration; STEP-BD, Systematic Treatment Enhancement Program for Bipolar Disorder.

evaluation, only 20% of the respondents said that they were very likely to follow this patient’s clinical course over time using a mood chart.

Although 65% of the respondents reported that they were “very confident” in their ability to manage the side effects of medications used to treat depression in bipolar I disorder, 60% indicated that they would also refer the patient to a primary care physician for management of side effects. Almost all (98%) respondents thought that sleep hygiene was important for patients with depression in bipolar disorder, and 92% counseled their patients about it “most of the time” or “always.”

**Barriers to Optimal Management**

Focus group sessions identified several barriers to optimal management of depression in patients with bipolar I disorder (Figure 6). When these were further investigated in the survey, most of the psychiatrists identified poor adherence to treatment regimens (68%), comorbid psychiatric illnesses (65%), obtaining an accurate diagnosis (55%), and patients who respond poorly to typical medications (57%) as “very significant” barriers to optimally managing depression in patients with bipolar I disorder.

**Discussion**

Although bipolar I disorder is one of the classically recognized serious mental illnesses and there are several effective treatments available, there is evidence to indicate that many patients are not diagnosed until after experiencing multiple episodes of illness and, at any given time, only a minority are receiving adequate treatment. There is also evidence to suggest that the depressive pole of bipolar illness accounts...
for a substantial proportion of the illness burden associated with this condition. Results of this survey of 200 US-based psychiatrists illustrate that there are a number of important gaps in knowledge about the management of bipolar depression, which in turn helps to clarify objectives of continuing education and practice improvement strategies.

**Diagnosis**

The literature directly comparing MDD with depression in bipolar I disorder is dominated by clinical opinion and conclusions that are often inconsistent, raising the question of whether unipolar depression and depression in bipolar I disorder can be differentiated in clinical practice. Guidelines reflect the lack of clinical differentiation between unipolar and bipolar depressive episodes in the diagnostic criteria in the DSM-IV and the *International Statistical Classification of Diseases and Related Health Problems-10* (ICD-10) system; however, they do suggest that symptoms like “leaden paralysis,” hypersomnia, increased appetite, suicidal ideation, pessimism, and fear may be more common in depression in bipolar I disorder. The distinction between MDD and depression in bipolar I disorder appears to be one of clinical judgment, with a history of mania or hypomania as the factor of “utmost importance” for establishing a diagnosis of depression in bipolar I disorder. To that end, in our survey, although the majority of respondents indicated that they would ask questions to identify undiagnosed mania that are consistent with guideline recommendations, > 50% of psychiatrist respondents reported that obtaining an accurate diagnosis was a significant barrier to optimally managing depression in patients with bipolar I disorder. Difficulty in establishing a diagnosis despite appropriate history taking may be based on a number of factors. Although our respondents said that they specifically ask questions to uncover undiagnosed mania, in practice, they may find that they do not have time to do this and often do not have the opportunity to interview significant others who may provide important observations and information about their loved ones’ conditions. When asked questions about manic symptoms, patients may not recall correctly, may lack insight into manic events, may be embarrassed to answer honestly, or may find their depressive symptoms to be more of a burden and thus downplay their manic symptoms. Indeed, depressive episodes are more common than mania and last longer in those with bipolar I disorder. In addition, most disability associated with bipolar disorder is associated with depression, so depression may be the focus of patient attention. Other factors that make a diagnosis of depression in bipolar I disorder more likely are an earlier onset of illness and a family history of bipolar disorder. In our survey, 39% of psychiatrists were not aware of age of onset as a clinical factor differentiating MDD from depression in bipolar I disorder. We did not ask specifically about how respondents obtained family history information; however, improved accuracy in this area might contribute to better outcomes by leading to more appropriate medication choices.

Given the study findings and the fact that nearly one-third of patients are not correctly diagnosed ≥ 10 years after their initial presentation, there is a continued need for physician education on parameters that may be used to help differentiate MDD from depression in bipolar I disorder. In this regard, it is important for physicians who treat depression to keep in mind that, in addition to early onset of illness, a history of highly recurrent depressive episodes, especially early in the treatment course, is also suggestive of bipolarity. This, along with a more accurate family history, might allow the psychiatrist at each presentation of recurrent depression to reconsider the diagnosis of bipolar disorder and to reexamine the risk factors and potential clinical indicators of bipolar disorder.

**Initial Management**

The primary goal of pharmacologic treatment for bipolar disorder is mood stabilization (ie, resolution of the index episode without provocation of the opposite illness pole or rapid cycling). Lithium, anticonvulsants, and antipsychotics are used in the treatment of mania. There are fewer FDA-approved treatment options for depression in bipolar I disorder than there are for MDD, which to some extent may explain why physicians historically have had to rely on off-label use of medications. Antidepressants are one of the most commonly prescribed classes of drugs for depression in bipolar disorder, although none have received FDA approval for treatment of this specific condition. Meta-analyses of clinical trials suggest efficacy; however, there is no consensus on the utility of antidepressants when added to mood stabilizers for the treatment of depression in bipolar disorder. There is reasonable consensus that patients with depression in bipolar I disorder should not receive antidepressant monotherapy because of the risk of mood switching and rapid cycling, and there is growing concern that antidepressants may increase the risk of mixed states, which may lead to worsening symptoms, functional impairment, and even a higher risk of suicide. Results from the STEP-BD trial, a large effectiveness trial funded by the
National Institute of Mental Health, indicate that adjunctive antidepressant therapy did not significantly improve depressive symptoms in bipolar disorder compared with mood stabilizers alone.\textsuperscript{21} Guideline recommendations offer little clarification on the role of antidepressants in treating depressive symptoms in patients with bipolar I disorder. The major trend in recent years has been the adoption of quetiapine monotherapy as a first-line agent, or combination olanzapine/fluoxetine. However, most treatment guidelines still advocate the use of antidepressants as potential first-line agents in the acute treatment of depression in those with bipolar disorder as an adjunct to mood stabilizers.\textsuperscript{21}

Results from our study reflect the uncertainty of treatment recommendations. Less than 50% of the psychiatrist respondents appropriately selected an antidepressant for treating a patient who presents with depression and no other clinical risk factors for bipolar I disorder. When asked what therapy would be chosen for a patient presenting with depression who had a risk factor for bipolar I disorder (family history of bipolar disorder), \textgreater{} 50% said that they would not change their treatment strategy. However, when psychiatrists were specifically asked which class of medication they would select to treat a patient at risk for bipolar I disorder, their responses revealed a clear shift away from antidepressants to a mood stabilizer or an atypical antipsychotic. This disparity between psychiatrists’ theoretical choice of agents for patients with depression and bipolar risk factors and their actual clinical management reflects an underlying concern about precipitating a manic episode. Furthermore, while most psychiatrists reported that they were only “somewhat” concerned about the risk of precipitating a manic episode in a patient with risk factors for bipolar I disorder, 75% reported that they would discuss the possibility of a manic episode with such a patient. This finding may also suggest a latent concern that the choice of treatment could lead to a manic episode. This concern about the potential for antidepressants to precipitate a manic episode is based on factual knowledge, with only 5% of respondents not selecting “There is an increased risk for treatment-emergent mood disorder in depression in bipolar I disorder compared with MDD” as a true statement, and 10% selecting “They (depression in bipolar I disorder and MDD) respond similarly to antidepressants.” These findings suggest that physicians are not confident in their choices for therapy in patients presenting with depressive symptoms and risk factors for bipolar I disorder, and may want to treat the depression using antidepressants but are wary of precipitating a manic episode.

For a patient already on an antidepressant who presents with a depressive episode but who has experienced a previous untreated manic episode, most respondents reported that they would add an agent that addressed both the current depression and the potential future manic episodes (either a mood stabilizer or an atypical antipsychotic). Rationales for these choices most often addressed the potential for mania (preventing mania [47%], the patient has bipolar I disorder [23%]), with fewer concerned with treating depression more effectively (28%). However, 9% reported that they would simply increase the dosage of the patient’s antidepressant, and 3% said that they would switch the patient to another antidepressant; the rationale for these decisions was to treat the depression more effectively.

Confusion about managing patients with depression in bipolar I disorder may be related to low levels of awareness and a low impact on clinical practice that recent clinical trial data seem to have made on our study sample. Only 28% of respondents were “very familiar” with the recent STEP-BD trial; almost none were familiar with other recent large trials, and < 25% considered the results of recent clinical trials to be an important factor in selecting therapy. However, 41% of the psychiatrist respondents believed that it was very important that an agent have an FDA-approved indication for the diagnosis. Although only 2 treatments have been approved by the FDA for treatment of bipolar depression (quetiapine and olanzapine/fluoxetine combination), 21 clinical trials have published results since 2009 on the efficacy of various pharmacotherapies for bipolar depression. Thus, at a time of increased research activity, there is great need for ways to help practicing psychiatrists gain greater familiarity with recent therapeutic developments.

The respondents reported that their selections of therapy were based on an agent’s efficacy, speed of effect, side effects, and their own personal experience with an agent, but 68% of physicians identified patient adherence as the primary barrier to optimal management of depression in patients with bipolar I disorder. The concern about adherence is reflected in a recent survey of experts, which found that long-term adherence to prescribed medication among patients with bipolar disorder is suboptimal (13%).\textsuperscript{26} Such a concern is also supported by a 2010 review that reported a long-term adherence rate to mood stabilizers in patients with bipolar disorder of between 34% to 80%.\textsuperscript{27} Studies have identified lack of insight, cognitive difficulties, medication side effects, persistent manic symptoms, and concurrent substance abuse as key barriers to medication adherence.\textsuperscript{27} The prevalence of low adherence and the
concerns reported by the physician sample in this study indicate a need for education focused on effective strategies for assessing and fostering adherence, such as pill counts, pharmacy records, and (when appropriate) serum drug levels, as well as vigorous management of potential medication side effects.28

**Ongoing Management**

The majority of psychiatrists would continue to see a patient weekly or every 2 weeks until they felt the patient to be stable; however, 23% would only see the patient once per month until the patient was stable. Only 20% said that they were very likely to use a mood chart to follow a patient’s clinical course over time, indicating that the majority of psychiatrists rely on recall and notes to follow a patient’s clinical course. However, screening tools, such as the Mood Disorder Questionnaire, can support ongoing management by providing uniform evaluations from visit to visit. This tool has been found to be more sensitive in evaluating psychiatric patients than patients in the general population, and its specificity has been validated in both psychiatric and general medical patients.7 These findings suggest that physicians need education on ongoing management strategies and the utility of validated instruments for accurately charting disease courses over time.

In addition to patient adherence, other issues identified as significant barriers to the optimal management of depression in patients with bipolar I disorder included comorbid psychiatric illness (65%), poor response to typical medications (57%), and treatment side effects (47%). Strategies to address comorbid psychiatric illness (eg, referral for substance abuse treatment), and managing side effects (eg, start with a low dose, avoid certain medications) have proven efficacy. However, psychiatrists cited “trial and error” as their way of managing patients who respond poorly to typical medications, demonstrating their need for more education on treating difficult-to-manage individuals. Given our results, it is surprising that a majority of psychiatrists expressed confidence in their ability to manage depression in a patient with bipolar I disorder, as well as the side effects of medication.

**Limitations**

This study used a case-based survey as a surrogate measure of psychiatrists’ self-reported skills, knowledge, and attitudes in relation to managing depression in patients with bipolar I disorder. Although case vignettes have been shown to provide valid and reliable data on clinicians’ actual practice patterns,11,12 we only used 2 clinical scenarios and did not, therefore, cover the full spectrum of patient scenarios.

The low response rate (17.4%) to the case-based survey is a result of obtaining responses quickly and may present selection bias for the sample. Obtaining responses more quickly provided a more accurate snapshot of practice patterns at a particular point in time without having to account for advances in clinical information. Additionally, the demographic characteristics of our sample were similar to those of the population of physician members described in the American Medical Association in 2011.29 A sample size of 200 psychiatrists provided this study with a ± 7% margin of error. We also provided respondents with a small honorarium to complete the study, which could have influenced participation rates and responses. Finally, the cross-sectional design of the study did not allow for causal inferences to be drawn.

**Conclusion**

The most common misdiagnosis in patients presenting with depression in bipolar I disorder is MDD. Guidelines uniformly recognize the difficulty in distinguishing MDD from depression in bipolar I disorder in individuals who have not experienced a manic episode. The psychiatrists in this study acknowledged the challenges associated with making an accurate diagnosis in a patient with depressive symptoms and displayed implicit concern that antidepressant monotherapy for individuals with bipolar disorder could lead to treatment-emergent affective switches. Results confirmed that the risk of precipitating a manic episode when initiating antidepressant therapy in patients who present with depression and have, as of yet, undiagnosed bipolar I disorder is the central management issue for clinicians. Clinicians’ lack of familiarity with recent clinical trial results and a reluctance to use those data in clinical practice may also prove to be an impediment to optimal management of their patients. Accordingly, findings from this study support the need for education to enable psychiatrists to: 1) differentiate between MDD and depression in bipolar I disorder; 2) identify the risk of treatment-emergent mood disorders with the use of antidepressants in those with MDD compared with their use in those with bipolar I disorder; 3) effectively manage patients at risk for bipolar I disorder; 4) incorporate clinical trial data into their practices; and 5) treat patients who respond poorly to standard therapy.

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Conflict of Interest Statement
Terry Ann Glauser, MD, MPH, Wendy Cerenzia, MS, Shereta Wiley, MPH. Alexandra Howson, PhD, and Michael Thase, MD, disclose no conflicts of interest.

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