# Improving Treatment Adherence in Bipolar Disorder Through Psychoeducation

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The chronicity and cyclical nature of bipolar disorder combined with the irrationality typical during bipolar mood episodes often encourage pharmacologic treatment nonadherence, which heightens the severity of the illness. Although clinicians acknowledge treatment nonadherence to be a major issue among bipolar patients, assessing nonadherence is difficult, and improving treatment adherence is a complicated and delicate matter. Treatment adherence can be improved among patients with bipolar disorder through psychoeducation about the nature of their disorder and the vital importance of treatment adherence. Founded on a biopsychosocial, medical model of mental disorders, psychoeducation empowers the patient by providing a practical and theoretical approach to understanding and dealing with the symptoms and consequences of bipolar disorder. Psychoeducation identifies bipolar disorder as a biological abnormality that requires regular pharmacologic treatment and teaches patients to cope with symptoms and maintain regularity in daily social and occupational functioning. Psychoeducated patients show improvements in treatment adherence and in other clinical outcomes, including reduced number of mood episodes and hospitalizations and increased time between episodes. As an adjunct to pharmacotherapy of bipolar disorder, psychoeducation is a promising management component that increases treatment adherence and quality of life for patients.

*(J Clin Psychiatry 2005;66[suppl 1]:24–29)*

Treatment nonadherence is a substantial problem among patients with bipolar disorder. Although treatment noncompliance may happen with all illnesses, noncompliance to medication is especially common among patients with mood or psychotic disorders, such as bipolar disorder, due to the lack of rationality and insight that generally accompanies such illnesses. Because nonadherence is often caused by a failure to understand the nature of the disorder and the importance of complying with pharmacologic treatment, adherence may be improved by helping patients to understand their disorders and convincing them that a regular medication regimen is vital to maintaining health. Psychoeducation provides this insight and adherence motivation for patients with bipolar disorder and improves clinical outcomes by reducing treatment nonadherence.

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*This article is derived from the teleconference "New Perspectives in Treating Bipolar Disorder," which was held May 26, 2004, and supported by an unrestricted educational grant from GlaxoSmithKline.*

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## BURDEN OF BIPOLAR DISORDER

Despite pharmacologic treatment, patients with bipolar disorder spend almost half of their lives with symptoms.[1] Subsyndromal, minor depressive, or hypomanic symptoms are experienced 3 times more often than syndromal-level depression or mania[1] and impair functioning. In a study[2] of syndromal and functional recovery among patients with bipolar disorder, 98% of patients achieved syndromal recovery within 24 months after their first manic episode, but less than half of them achieved functional recovery. Functional recovery was achieved by only 30% of patients 6 months after their first manic episode, and only 38% had functionally recovered at the 2-year follow-up.

Cognitive impairment is responsible for much of the dysfunction in bipolar disorder.[3] Patients with bipolar disorder show cognitive dysfunction, including verbal memory and frontal executive task impairment, across different mood states and even in remission. Subthreshold depressive symptoms are also a source of cognitive impairment. Patients with bipolar I disorder, a history of psychotic symptoms, a longer duration of illness, or a higher number of episodes are more likely to show enduring neuropsychological disturbances. Not only early diagnosis and treatment but also compliance with treatment are important for preventing cognitive dysfunction and the negative impact it has on the psychosocial outcome of patients with bipolar disorder.[4]

## TREATMENT ADHERENCE

Studies[5,6] of treatment adherence among patients with bipolar disorder have revealed that 25% to 64% of subjects do not fully comply with pharmacologic treatment instructions. In a study[7] of the number of days that patients adhered to lithium treatment, the gold standard in bipolar disorder treatment, Johnson and McFarland found the median adherence time to be only 76 days. This short length of lithium adherence may be more detrimental to the patient than not taking lithium at all because of the high likelihood of rebound or relapse after abruptly stopping lithium treatment.[8]

Noncompliance may influence the number of different medications that many patients with bipolar disorder are prescribed. Combination therapy is common in bipolar disorder, and patients take an average of 4 different psychiatric medications.[9] Although some patients may need multiple medications to reduce the disability caused by bipolar disorder, the high number of medications may actually indicate low pharmacologic compliance with the original regimen. That is, clinicians may continue to prescribe additional medications for patients who are not showing the desired improvement, although the real reason for the lack of improvement may be that these patients are not taking their medication as prescribed. It is vital that clinicians, rather than simply prescribe more medications, recognize noncompliance among their patients and convince the patients to adhere to pharmacologic treatment.

### Assessment of Treatment Adherence

Determining pharmacologic noncompliance in patients with bipolar disorder is difficult.[10] Most assessment techniques are potentially unreliable. Frequently, self-assessment by patients is questionable. Patients with bipolar disorder often overestimate their treatment adherence when asked about it by their psychiatrists, although patients may be more truthful with another clinician, usually one who is not primarily responsible for medication treatment, such as a nurse or psychologist. Relatives and caregivers are often more reliable informants, although they may be unaware of partial adherence. Pill counts may also be inaccurate because patients may take their pills out of a blister pack or bottle without actually ingesting them. Even blood monitoring may be an undependable method of assessment because some patients may reach acceptable blood levels by taking their medication for only the few days before a scheduled blood test. Given the unreliability of most forms of compliance assessment, the best methodology for measuring adherence may be a combination of patients' reports, caregivers' reports, and unscheduled blood monitoring. Special devices that count the number of times a medicine bottle is opened can be useful assessment tools, especially in clinical trials, but they may not be practical for common use. Another option may be prescribing a drug presentation that is easier to assess, such as single daily dose, oral dispersible formulations, or depot.[10]

Using a combination of compliance assessment methodologies, a study[11] of treatment adherence found that only 60% of the euthymic bipolar subjects were fully compliant. Despite many self-reports to the contrary, 27% were partially compliant, and 13% were taking no medication at all. For this study, patients and caregivers were interviewed about treatment compliance, and surprise blood checks were given in cases where compliance was in doubt.

**Table 1. Factors Associated With Treatment Nonadherence in Bipolar Disorder**

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|---|
| Lack of insight[6,15,16] |
| Hypomania denial[14] |
| Hyperthymia[17] |
| Male gender[18,19] |
| Young age[18–20] |
| Unmarried[17,20–23] |
| Low educational level[20,24] |
| History of poor compliance[7,8,20,25] |
| Cognitive dysfunction[19,24] |
| High number of episodes[24] |
| Personality disorders[5,11,14,22,24] |
| Early onset[5] |
| High number of hospitalizations[5,11,22,25,26] |
| Substance abuse[5,15,22,26,27] |
| Low social support[21] |
| Grandiosity[21] |
| Manic type[21] |
| Mood-incongruent psychotic features[28] |
| Manic symptom severity[6] |
| Combination of mood stabilizers[6] |
| Lithium side effects[27,29,30] |
| Low number of episodes[11,19,25] |

### Factors Associated With Treatment Nonadherence

The factors that make treatment noncompliance more likely among patients with bipolar disorder are numerous. Treatment nonadherence is generally associated with denial about the seriousness or the chronicity of the disorder. Patients with bipolar disorder who are noncompliant usually lack insight into the nature of their disorder and do not understand the imperative for long-term treatment.[12,13] Numerous studies[5–8,11,14–30] have pinpointed specific factors, listed in Table 1, that are associated with treatment nonadherence in bipolar disorder.

## RATIONALE FOR PSYCHOEDUCATION ABOUT BIPOLAR DISORDER

Bipolar relapse and heightened severity of mood episodes are often caused by treatment nonadherence. Education about the cyclical nature of the disorder, the tendency of bipolar episodes to impair rational judgment, and the necessity for ongoing treatment encourages patients with bipolar disorder to take their medication by

convincing them of their need for comprehensive treatment. By increasing compliance, psychoeducation can help to close the efficacy-effectiveness gap in pharmacologic treatment. That is, medication shows less effectiveness in individual patients than it does efficacy in trials because patients in the clinical setting often do not take all of their medication as directed, and individual patients are generally not monitored to the extent of those in trials. Better compliance would help increase the effectiveness of treatment. The increased acceptance of the stress-vulnerability model also supports the implementation of psychoeducation among patients with bipolar disorder. If patients who are vulnerable to mood episodes during times of stress can be educated about the importance of continuing to take their medications, their risk of relapse may be diminished; psychoeducation can also provide coping skills to be used during stressful periods.[31]

Some patients' bipolar disorder is refractory to pharmacologic treatment, and psychoeducation offers some insight into coping with the disorder when it is not treated adequately with medication. Even for those patients who respond to medication, pharmacologic treatment has limitations in that it does not provide information or coping skills. Psychoeducation may also help to reduce suicide risk and switch risk (the risk of switching between manic and depressive episodes) in patients with bipolar disorder. Overall, the addition of psychoeducation to existent pharmacologic treatment creates a more ambitious treatment paradigm that addresses different aspects of bipolar disorder and helps patients live with the disorder through symptom reduction and a greater understanding of the illness.[32]

In recent years, psychiatrists have been examining the efficacy of various types of psychological treatments as adjuncts to medication in patients with bipolar disorder. Hence, coming from a time when wishful thinking was the foundational support for any psychotherapy in manic-depressive illness, through an era of despair driven by disappointment about "psychological cure," the new millennium has carried new hope by means of empirically supported, well-designed psychological interventions.[33] Perry and colleagues[34] found that teaching patients to identify the early signs of relapse (prodromal signs) lengthened the time to first manic relapse and improved occupational and social functioning. Interpersonal and social rhythm therapy were used by Frank and colleagues[35] because of the theory that bipolar disorder includes a genetic predisposition to abnormalities in the sleep-wake cycle and circadian rhythm, which contribute to the symptoms of bipolar disorder. A regularization of routines through interpersonal therapy and behavioral techniques did improve function and help to control symptomatology among patients with bipolar disorder. Miklowitz and colleagues[36] used family-focused psychoeducational treatment with the families of bipolar patients and found that this type of psychoeducation decreased the number of relapses, lengthened the time until relapse, and decreased severity of depressive symptoms among patients. Family-focused psychoeducational therapy also improved treatment adherence.[37] Cognitive therapy was effectively used in conjunction with mood stabilizers to prevent bipolar relapse in a study by Lam and colleagues.[38] In 2003, Colom and colleagues[39] found that group psychoeducation of patients with bipolar disorder showed significant improvement on several measures, including number of relapsed patients, number of recurrences per patient, number of hospitalizations, and length of time to recurrence.

## USING PSYCHOEDUCATION IN BIPOLAR DISORDER

Psychoeducation can be a valuable treatment for bipolar disorder when used in conjunction with pharmacotherapy. The medical model of disorder education, as used with diabetes and hypertension, for example, enables the bipolar patient to theoretically understand and practically cope with the symptoms and consequences of bipolar disorder. By identifying bipolar disorder as a biological abnormality that requires regular pharmacologic treatment, psychoeducation emphasizes the vital need for treatment adherence and teaches patients to recognize early symptoms of recurrence, manage these symptoms, and maintain regular daily functioning as much as possible. Psychoeducation in bipolar disorder should focus on the illness and its consequences.[40] Psychoeducation is particularly effective as prophylaxis when used with euthymic patients but may not be as useful for acute treatment of bipolar episodes as it is for prevention of relapse. Furthermore, psychoeducation may not be useful for all patients with bipolar disorder, and it may have side effects. For instance, some patients with an obsessive-compulsive personality may become exceedingly concerned about detecting the early warning signs of relapse, unnecessarily increasing the number of extra visits to their psychiatrist and potentially receiving unjustified extra medication. Others may become too rigid about sleeping habits, missing social events or travel because they feel they must adhere inflexibly to their regular sleep schedule. Finally, a recent controlled trial on the efficacy of cognitive-behavioral therapy in bipolar patients suggests that patients who are still symptomatic and have a higher number of previous episodes may become distressed by this kind of intervention and may actually worsen.[41] Most importantly, psychoeducation is an adjunctive treatment for bipolar disorder and will not work as a monotherapy without medication.

### Combined Pharmacotherapy and Psychoeducation for Bipolar Disorder

Psychoeducation seeks, generally, to increase the patients' insight into their illness and to increase their aware-

**Table 2. Contents of the Psychoeducative Program (Barcelona Bipolar Disorders Program)[a]**

| |
|---|
| 1. Introduction |
| 2. What is bipolar illness? |
| 3. Causal and triggering factors |
| 4. Symptoms (1): mania and hypomania |
| 5. Symptoms (2): depression and mixed episodes |
| 6. Course and outcome |
| 7. Treatment (1): mood stabilizers |
| 8. Treatment (2): antimanic agents |
| 9. Treatment (3): antidepressants |
| 10. Serum levels: lithium, carbamazepine, and valproate |
| 11. Pregnancy and genetic counseling |
| 12. Psychopharmacology vs alternative therapies |
| 13. Risks associated with treatment withdrawal |
| 14. Alcohol and street drugs: risks in bipolar illness |
| 15. Early detection of manic and hypomanic episodes |
| 16. Early detection of depressive and mixed episodes |
| 17. What to do when a new phase is detected |
| 18. Regularity |
| 19. Stress management techniques |
| 20. Problem-solving techniques |
| 21. Final session |

[a]Reprinted with permission from Colom et al.[43]

ness about the consequences of its being untreated. Because psychoeducation alone will not prevent episodic relapse or treat acute episodic symptoms in bipolar disorder, one of the primary goals of psychoeducation is to encourage patients to adhere to their prescribed pharmacotherapy. Using combined treatment of psychoeducation and pharmacotherapy, clinicians seek to treat acute mood episodes, psychotic symptoms, anxiety, and insomnia. They also seek to prevent recurrences of mood episodes, substance abuse, and suicide and to improve treatment adherence, interepisodic functioning, and the patient's ability to cope with the impairment of bipolar disorder.[40] Patients receiving combined treatment are taught to identify prodromal symptoms early, to cope with the psychosocial consequences of past and future episodes, and to adjust to having a chronic illness. They are also given general information about their illness. Additionally, combined treatment provides emotional support to the patient and encourages and fosters family support of the patient.[42]

### Psychoeducation Treatment Protocol

According to Colom et al.,[43] psychoeducation for bipolar disorder can be conducted in a group setting with 8 to 12 euthymic patients. Patients are classified as euthymic when they score less than 6 on the Young Mania Rating Scale[44] for at least 6 months and less than 8 on the Hamilton Rating Scale for Depression[45] for at least 6 months. Group psychoeducation is directed by 2 trained psychologists, in 21 90-minute sessions (Table 2).[43] All participating patients continue with standard pharmacologic treatment, but no other psychological intervention is allowed concurrently. The sessions are conducted according to the medical model, which has been used successfully in other disorders in which patients must be aware of the chronicity of their disease and the need for ongoing treatment. Although the directive style is used in the psychoeducation sessions, participation by the patients is encouraged. The clinicians administering the sessions must ensure that the psychoeducation stays focused on the illness. Generally, each session consists of 30 to 40 minutes of presentation about the subject matter followed by a participatory exercise related to the topic of the day (e.g., making a list of potential episode triggers, drawing a life chart).[43]

## EFFICACY OF PSYCHOEDUCATION IN BIPOLAR DISORDER

Psychoeducation as an adjunct to pharmacologic treatment of bipolar disorder has proven successful in various areas and according to various measures. Psychoeducated patients have fewer mood episodes, fewer hospitalizations, and longer durations between episodes. The improvement of treatment adherence is most likely the greatest achievement of psychoeducation among patients with bipolar disorder because that improvement feeds success in most other measures.

In a recent study[39] of 120 bipolar patients, group psychoeducation was successful in the prophylaxis of recurrences. The patients were divided equally, matched by age and sex, into either a control group, which received pharmacologic treatment plus a nonstructured group intervention, or an experimental group, which received pharmacologic treatment and psychoeducation. At the end of the 6-month study and at 2-year follow-up, psychoeducated patients showed longer times to episode recurrence than the controls.

Among the psychoeducated group, the percentage and number of relapsed patients were lower for every type of episodic recurrence.[39] At 6 months, 36 patients (60%) in the control group fulfilled criteria for recurrence, but only 23 (38%) of the psychoeducated patients experienced recurrence. At 2-year follow-up, 55 (92%) of the controls and 40 (67%) of the psychoeducated patients had relapsed. The number of relapses into each specific episode was also significantly lower among the psychoeducated group. Within the 6-month treatment phase, 20 (33%) of the controls and 12 (21%) of the psychoeducated patients relapsed into mania or hypomania, and 45 (75%) of the controls and 28 (49%) of the psychoeducated patients had relapsed into mania or hypomania at the 2-year follow-up. Relapses into mixed episodes were lower among the experimental group, with 13 (22%) of the controls and 7 (13%) of the psychoeducated patients experiencing this type of recurrence within the treatment phase, and 27 (45%) of the controls and 11 (20%) of the psychoeducated patients experiencing mixed episodes at 2-year follow-up. Likewise, the number of depression relapses was lower among the psychoeducated patients,

with 19 (32%) of the control and 8 (14%) of the psychoeducated patients having depressive episodes within the 6-month treatment phase, and 43 (72%) of the controls and 24 (41%) of the psychoeducated patients having experienced depressive episodes at the 2-year follow-up.

The number of hospitalizations and the number of days spent in the hospital were also lower among the psychoeducated patients.[39] At 2-year follow-up, 21 (35%) of the patients in the control group had been hospitalized due to recurrence of their bipolar disorder, while only 14 (25%) in the psychoeducated group had been hospitalized for this reason. Psychoeducated patients had a significantly lower mean total number of days (24.18 days) of hospitalization at the 2-year follow-up than control patients (41.66 days).

Psychoeducation has shown success among disparate populations of patients with bipolar disorder, such as those who have concurrent personality disorders. In a recent study[46] of this subset, patients who received psychoeducation showed lower relapse rates than those who did not. Although all control patients had relapsed before the 2-year follow-up, less than 75% of psychoeducated patients had relapsed at 2 years.

The burden of bipolar disorder has also been reduced by psychoeducating family members and caregivers of patients with bipolar disorder.[47] Knowledge of bipolar disorder was found to be inversely proportional to the subjective burden of the illness. The greater the knowledge of the disorder among caregivers or family members, the less likely they were to blame the patient for the objective burden resulting from bipolar disorder (e.g., financial problems, family problems). Family support for the patient, which is increased and encouraged by family psychoeducation, is, in turn, associated with clinical improvements in the bipolar patient.[37] Patients whose family members participated in psychoeducation had fewer relapses, longer intervals between episodes, increased treatment adherence, and reduced mood disorder symptoms.

Although improving medication adherence is a major goal of psychoeducation, even patients who are already highly treatment adherent can benefit from psychoeducation. In a study[43] of 50 highly compliant bipolar patients, the number of recurrences and depressive episodes was significantly lower among psychoeducated patients. At the 2-year follow-up, 23 (92%) of controls had experienced a recurrence but only 15 (60%) of psychoeducated patients had experienced a recurrence. Psychoeducation for bipolar disorder, therefore, has additional benefits beyond enhancing medication adherence: psychoeducation promotes a healthy lifestyle and helps patients identify early signs of relapse. When psychoeducation helps a bipolar patient to achieve these goals, symptomatic intensity and frequency lessen, and the patient's quality of life increases.

## CONCLUSION

Pharmacology and psychoeducation have different targets in the same patient. When attempting to treat a chronic illness like bipolar disorder, adherence to long-term treatment is vital. The cyclical nature of bipolar disorder and the irrationality associated with mood episodes make medication nonadherence very common and difficult to assess among patients. Psychoeducation improves the clinical outcome of bipolar patients, primarily because it increases adherence to medication by educating the patient about the nature of the illness and convincing the patient of the importance of treatment adherence. In addition to improved treatment compliance, patients participating in psychoeducation show a lower number of total mood episodes and a lower number of hospitalizations. Psychoeducation is a valuable component in the treatment of bipolar disorder because of its effectiveness in improving treatment adherence and other measures of outcome.

*Drug names:* carbamazepine (Tegretol, Epitol, and others), lithium (Lithobid, Eskalith, and others).

*Disclosure of off-label usage:* The author has determined that, to the best of his knowledge, carbamazepine is not approved by the U.S. Food and Drug Administration for the treatment of bipolar disorder.

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