

## Bipolar Disorder and Work Loss

Charles L. Bowden, MD

### Abstract

Bipolar disorder affects many aspects of an individual's life and greatly interferes with a person's ability to find and maintain employment. The evidence indicates that a majority of patients with bipolar disorder are not employed and many others are employed only part time. Job-related difficulties are common, and patients with bipolar disorder tend to have higher rates of absenteeism from work compared with working individuals without bipolar disorder. A limited amount of data suggests that appropriate treatment may improve occupational status among patients with bipolar disorder. The ability to work is closely related to functional recovery, which tends to be incomplete in a majority of patients with bipolar disorder.

(*Am J Manag Care. 2005;11:S91-S94*)

**B**ipolar disorder affects virtually every aspect of a patient's life, resulting in a high socioeconomic burden. Estimates of the condition's cost to society range are as high as \$45 billion annually. The vast majority of the total comes from indirect costs, which include reduced productivity, work loss, and unemployment.<sup>1</sup>

Bipolar disorder is associated with high rates of unemployment and job-related difficulties. A survey by the National Depressive and Manic-Depressive Association showed that approximately 60% of individuals with bipolar disorder were unemployed, even among patients with college degrees. Additionally, 88% of the respondents reported occupational difficulties.<sup>2</sup> Data from a large registry of patients with bipolar disorder also demonstrated an unemployment rate of about 60%.<sup>3</sup> Data from a US national sample showed that self-reported bipolar disorder was associated with a 40% reduction in the likelihood of paid employment.<sup>4</sup>

### Studies of Work Impairment and Loss

A number of smaller studies also have documented high rates of unemployment. Six-month follow-up of a group of patients hospitalized for a manic episode showed that only 43% of patients were employed, although 80% were symptom free or mildly symptomatic.<sup>5</sup> Another group of patients hospitalized for mania were evaluated 1.7 years later, and 42% of the patients reported having steady employment throughout the follow-up period. Moreover, 23% had been unemployed for the entire period.<sup>6</sup> A 5-year follow-up of a group of patients with bipolar disorder showed that 62% were employed in the year before the study, which was significantly less than what was found among a comparison sample of persons without a mood disorder.<sup>7</sup>

Another study related employment status to cognitive functioning.<sup>8</sup> The study involved 117 patients with bipolar disorder, who underwent a battery of cognitive and symptom assessments. The study showed that more than 50% of the patients were unemployed, and only 27% had competitive full-time employment. Current employment status was significantly associated with cognitive functioning, particularly immediate verbal memory. Other factors that influenced employment status were total symptom severity, history of psychiatric hospitalization, and maternal education. In the National Institute of Mental Health Systematic Treatment Enhancement Program for Bipolar Disorders, among patients who entered in a depressive episode, whereas educational achievement was high (with 82% either having graduated from college or having some college study), annual income was low, with 91% having earned less than \$30 000 in the previous year (Hong Wei Zhang, written communication, February 2005).

Among employed individuals with bipolar disorder, absenteeism from work often poses problems. A study of primary care patients showed that a diagnosis of bipolar disorder was associated with a 7-fold likelihood of missing work because of illness.<sup>9</sup>

A recent literature review identified 14 studies that evaluated work impairment among individuals with bipolar disorder.<sup>10</sup> The studies found in the literature search focused on work impairment expressed as long-term unemployment, occupational functioning, absenteeism because of emotional problems and somatic complaints, and poor work performance. Each of the parameters was observed more often among patients with bipolar disorder, even when compared with people with other types of mental illness.

#### **Treatment and Costs**

The literature review uncovered a limited amount of evidence to suggest that treatment improves health-related quality of life and functioning while reducing healthcare resource utilization and cost.<sup>10</sup> One study found that patients who achieved standard lithium serum levels had better work performance compared with patients who had low lithium serum levels, suggesting that undertreatment can have a negative impact on occupational functioning.<sup>11</sup> A more recent study found that patients who receive higher doses of quetiapine might have reduced utilization of mental health resources.<sup>12</sup> Another study compared the impact of olanzapine versus haloperidol on occupational functioning. After 12 weeks of treatment, the olanzapine group had slight improvement in work impairment and health-related quality of life, which was not seen in patients treated with haloperidol. However, only about 50% of the treated patients maintained their work status.<sup>13</sup> Group psychotherapy as an adjunct to medication has been found to improve impairment associated with school, housework, employment, and training.<sup>14</sup>

The costs associated with work loss were recently evaluated, using an employer-based database.<sup>15</sup> The analysis showed that the average annual absence in hours, short-term disability payments, and worker compensa-

tion payments were significantly greater compared with a control group without a diagnosis of bipolar disorder. Moreover, short-term disability payments were higher for patients with bipolar disorder than for those with major depression. The authors concluded that patients with bipolar disorder may exhaust their sick leave and go onto short-term disability more frequently than patients with major depression.

#### **Factors Affecting Work Status**

Additional studies have evaluated rehabilitation, training, and other factors that influence occupational status and job performance. One study looked at employment outcomes among patients with psychiatric disabilities who received job-seeking skills and logistical support during their job search.<sup>16</sup> The study found that 36% of patients either obtained a job or entered a job training program. Patients were more likely to obtain employment if they had a good work history, good job interviewing skills, and nonpsychotic diagnoses.

The effects of vocational rehabilitation were evaluated in another study involving 149 patients with severe mental illness.<sup>17</sup> The patients were followed for 18 months as investigators evaluated the impact of work on symptoms, quality of life, and self-esteem. On the basis of their predominant work activity during the study period, the patients were separated into 4 groups: competitive work, sheltered work, minimal work, and no work. The evaluation showed that competitive work was associated with greater improvement in symptoms, self-esteem, and satisfaction with vocational services, leisure, and finances compared with patients in the minimal-work and no-work groups. No such advantages were seen in the sheltered-work group.

Another report focused on the effects of different treatment strategies on social and occupational outcomes of patients with bipolar disorder.<sup>18</sup> Specifically, the author compared different approaches to treatment at lithium clinics. The review showed that continuous prophylaxis, as opposed to episodic treatment, benefited both employment and personal relationships.

Another group of authors evaluated the characteristics of successful psychiatric rehabilitation programs for individuals with severe mental illness.<sup>19</sup> The review identified 5 characteristics associated with successful rehabilitation. Effective interventions tend to be direct and behavioral. The programs have specific effects on related outcomes, with limited generalization to other domains. Short-term interventions are less successful than long-term interventions. Successful interventions are more likely to be delivered close to the patient's natural environment. Effective programs often combine skills training and environmental support.

A Canadian report described the characteristics of working age individuals affected by bipolar I disorder.<sup>20</sup> The review found that alcohol dependence, asthma, migraine, obesity, and panic disorder were far more prevalent among patients with bipolar disorder compared with the general population. Employment was more likely for patients who reported having readily accessible tangible social support.

#### **Worldwide Problem**

The problems and challenges posed by bipolar disorder are not unique to North America. A New Zealand study focused on the sociodemographic characteristics of a group of hospitalized patients with bipolar disorder.<sup>21</sup> The results showed that patients with bipolar disorder had poorer employment records compared with the average New Zealander despite having a higher level of education than the general population of the country.

A Dutch study evaluated the impact of bipolar disorder compared with the general population and particularly compared with patients with other psychiatric disorders.<sup>22</sup> The analysis showed that patients with bipolar disorder were more often incapacitated and were more likely to have attempted suicide and reported poorer quality of life. Notably, 83% of the patients with bipolar disorder reported a history of at least 1 additional mental disorder, and 25% of patients had never sought help for their emotional problems.

A study from Taiwan evaluated the co-occurrence of alcohol abuse and bipolar dis-

order and the impact on psychosocial outcome.<sup>23</sup> The data showed a lower rate of comorbid alcohol use compared with Western patients with bipolar disorder. Nonetheless, psychosocial outcomes, including marriage, work, and social adjustment, were similar among the Taiwanese patients to what has been reported in Western patients. Another Taiwanese study found a wide disparity between symptomatic improvement and functional status. Whereas a large majority of patients were symptom free or had only mild symptoms 1 year after an episode of bipolar disorder, only 46% of the patients were employed, and as few as 12% worked at their expected level of employment.<sup>24</sup>

*Between 30% and 60% of patients with bipolar disorder do not regain full social or occupational functioning after the onset of illness.*

#### **Functional Recovery**

Functional recovery in bipolar disorder has a strong influence on occupational status. Between 30% and 60% of patients with bipolar disorder do not regain full social or occupational functioning after the onset of illness.<sup>25</sup> Functional recovery often lags behind symptomatic recovery and might not be complete even when mood symptoms have subsided.<sup>5,7,26</sup>

Long-term outcomes were evaluated and compared in patients with bipolar disorder and with unipolar depression who were followed for 4.5 years.<sup>27</sup> At the end of follow-up, only 41% of the patients with bipolar disorder had a good overall outcome. Patients with bipolar disorder had more severe work impairment than patients with unipolar depression. In a study with 10-year follow-up, about 50% of a group of patients with bipolar disorder showed sustained remission or patterns of improvement, whereas 30% to 40% experienced some functional decline.<sup>28</sup>

**Conclusion**

Bipolar disorder has a profound impact on an individual's ability to find and maintain employment. Most studies show that only a minority of patients are gainfully employed on a regular basis. A majority of patients who are employed report job-related difficulties. Employment status mirrors functional recovery among patients with bipolar disorder. Between 30% and 60% of patients do not have full functional recovery, even with complete remission of symptoms.

.....  
**REFERENCES**

1. Wyatt RJ, Henter I. An economic evaluation of manic-depressive illness—1991. *Soc Psychiatry Psychiatr Epidemiol.* 1995;30:213-219.
2. Hirschfeld RM, Lewis L, Vornik LA. Perceptions and impact of bipolar disorder: how far have we really come? Results of the National Depressive and Manic-Depressive Association 2000 survey of individuals with bipolar disorder. *J Clin Psychiatry.* 2003;64:161-174.
3. Kupfer DJ, Frank E, Grochocinski VJ, Cluss PA, Houck PR, Stapf DA. Demographic and clinical characteristics of individuals in a bipolar disorder case registry. *J Clin Psychiatry.* 2002;63:120-125.
4. Zwerling C, Whitten PS, Sprince NL, et al. Workforce participation by persons with disabilities: the National Health Interview Survey Disability Supplement, 1994 to 1995. *J Occup Environ Med.* 2002;44:358-364.
5. Dion GI, Tohen M, Anthony WA, Watermaux CS. Symptoms and functioning of patients with bipolar disorder six months after hospitalization. *Hosp Community Psychiatry.* 1988;39:652-656.
6. Harrow M, Goldberg JF, Grossman LS, Meltzer HY. Functional impairment and cognition in bipolar disorder. *Arch Gen Psychiatry.* 1990;47:665-671.
7. Coryell W, Scheftner W, Keller M, Endicott J, Maser J, Klerman GL. The enduring psychosocial consequences of mania and depression. *Am J Psychiatry.* 1993;150:720-727.
8. Dickerson FB, Boronow JJ, Stallings CR, Origoni AE, Cole S, Yoken RH. Association between cognitive functioning and employment status of persons with bipolar disorder. *Psychiatr Serv.* 2004;55:54-58.
9. Olfson M, Fireman B, Weissman MM, et al. Mental disorders and disability among patients in a primary care group practice. *Am J Psychiatry.* 1997;154:1734-1740.
10. Dean BB, Gerner D, Gerner RH. A systematic review evaluating health-related quality of life, work impairment, and health-care costs and utilization in bipolar disorder. *Curr Med Res Opin.* 2004;20:139-154.
11. Solomon DA, Ristow WR, Keller MB, et al. Serum lithium levels and psychosocial function in patients with bipolar I disorder. *Am J Psychiatry.* 1996;153:1301-1307.
12. Gianfresco F, Wang R, Pesa J. Association between quetiapine dose and levels of mental health resource use among patients with schizophrenia or bipolar disorder. *J Manag Care Pharm.* 2004;10:462 (abstract).
13. Shi L, Namjoshi MA, Zhang F, et al. Olanzapine versus haloperidol in the treatment of acute mania: clinical outcomes, health-related quality of life, and work status. *Int Clin Psychopharmacol.* 2002;17:227-237.
14. Cerbone MJ, Mayo JA, Cuthbertson BA, O'Connell RA. Group therapy as an adjunct to medication in the management of bipolar affective disorder. *Group.* 1992;16:174-187.
15. Matza LS, de Lissovoy G, Sasane R, Pesa J, Mauskoff J. The impact of bipolar disorder on work loss. *Drug Benefit Trends.* 2004;16:476-481.
16. Jacobs HE, Wissusik D, Collier R, Stackman D, Burkeman D. Correlations between psychiatric disabilities and vocational outcome. *Hosp Community Psychiatry.* 1992;43:365-369.
17. Bond GR, Resnick SG, Drake RE, Xie H, McHugo GJ, Bebout RR. Does competitive employment improve nonvocational outcomes for people with severe mental illness? *J Consult Clin Psychol.* 2001;69:489-501.
18. Armond AD. The social and economic effects of manic depressive illness and of its treatment in lithium clinics. *Occup Med (Lond).* 1998;48:505-509.
19. Mueser KT, Drake RE, Bond GR. Recent advances in psychiatric rehabilitation for patients with severe mental illness. *Harv Rev Psychiatry.* 1997;5:123-137.
20. Wilkins K. Bipolar I disorder, social support and work. *Health Rep.* 2004;15(suppl):21-30.
21. McPherson HM, Dore GM, Loan PA, Romans SE. Socioeconomic characteristics of a Dunedin sample of bipolar patients. *N Z Med J.* 1992;105:161-162.
22. ten Have M, Vollebergh W, Bijl R, Nolen WA. Bipolar disorder in the general population in the Netherlands (prevalence, consequences and care utilisation): results from the Netherlands Mental Health Survey and Incidence Study (NEMESIS). *J Affect Disord.* 2002;68:203-213.
23. Tsai SY, Chen CC, Yeh EK. Alcohol problems and long-term psychosocial outcome in Chinese patients with bipolar disorder. *J Affect Disord.* 1997;46:143-150.
24. Jiang HK. A prospective one-year follow-up study of patients with bipolar affective disorder. *Zhonghua Yi Xue Za Zhi (Taipei).* 1999;62:477-486.
25. MacQueen GM, Young LT, Joffe RT. A review of psychosocial outcome in patients with bipolar disorder. *Acta Psychiatr Scand.* 2001;103:163-170.
26. Tohen M, Hennen J, Zarate CM Jr, et al. Two-year syndromal and functional recovery in 219 cases of first-episode major affective disorder with psychotic features. *Am J Psychiatry.* 2000;157:220-228.
27. Goldberg JF, Harrow M, Grossman LS. Course and outcome in bipolar affective disorder: a longitudinal follow-up study. *Am J Psychiatry.* 1995;152:379-384.
28. Goldberg JF, Harrow M. Consistency of remission and outcome in bipolar and unipolar mood disorders: a 10-year prospective follow-up. *J Affect Disord.* 2004;81:123-131.