

Bipolar Disorders
- Child and Adolescent -

DSM-IV TR Diagnostic Codes: 296.xx Bipolar I Disorder
.0x Single Manic Episode
.40 Most Recent Episode Hypomanic
.4x Most Recent Episode Manic
.6x Most Recent Episode Mixed
.5x Most Recent Episode Depressed
.7 Most Recent Episode Unspecified
296.89 Bipolar II Disorder
301.13 Cyclothymic Disorder
296.80 Bipolar Disorder Not Otherwise Specified

I. Diagnostic Guidelines

A. Rule outs of Special Importance:

1. Mood Disorder Due to a General Medical Condition (e.g., Steroid use, thyroid disorder, sleep deprivation...), Substance-Induced Mood Disorder, Major Depressive Disorder, Schizoaffective Disorder, Dysthymic Disorder, Psychotic Disorders, Pervasive Developmental Disorder, and ADHD.
2. A study indicated that bipolar depression differs from unipolar depression in that it is: (a) more likely to present at an earlier age; (b) more likely to present with severe impairment; (c) more likely to present with severe, prolonged, explosive, and violent irritability; (d) more likely to present with high levels of comorbidity with severe Oppositional Defiant Disorder, Conduct Disorder and anxiety disorders; and (e) more likely to present with suicidality.
3. Symptoms that most distinguished children with bipolar disorder from those with ADHD were: (a) elevated mood (89% vs. 14%); (b) grandiosity (86% vs. 5%); (c) Flight of ideas or racing thoughts (71% vs. 10%); (d) decreased need for sleep (40% vs. 6%); and (e) hypersexuality (43% vs. 6%). Also, ADHD presents as chronic versus episodic in nature.
4. While diagnostic criteria and treatment recommendations for childhood bipolar disorders is generally under the same guidelines as adults, clinical features in childhood bipolar disorders differ from the adult version as follows:

Onset before or soon after puberty: often characterized by continuous rapid cycling, irritability, hypersexuality, grandiosity and other mixed symptom states that may occur with disruptive behavior disorders, especially ADHD and Conduct Disorder.

Later adolescent or adult onset: tends to begin suddenly often with a classic manic episode and has a more distinguishable episodic pattern and relatively stable period between episodes. Less co-occurrence with ADHD and Conduct Disorder.

5. The average time from initial symptoms to diagnosis is eight years
6. Assessment of the nature of the parent/child relationship as indicated in the Diagnostic Manual for Children 0-3 is valuable for young children and their families.

B. Considerations of Special Importance during assessment

1. **Assessment of Severity:** Presence of psychotic features, cognitive impairment, risk of suicide/violence to persons or property, risk-taking behavior, and sexually inappropriate behavior. The lifetime incidence of completed suicide is 20% in bipolar disorders, many of these suicides occur during manic episodes. Bipolar disorder in children and adolescents is a chronic mood disorder that lasts several years. Studies show that while remission of symptoms occurs, there is less functional remission.
2. **Dimensions of Severity:** Bipolar disorders present in a wide spectrum of severity of symptoms and level of impairment. Bipolar I presents with the greatest level of severity and Cyclothymic with the least. In contrast to adults, children when manic, are more likely to be irritable, and/or have destructive outbursts versus feeling elated or euphoric. In the depressive phase, children will have many physical complaints, headaches, muscle aches, stomach aches, absence from school, poor school performance, talk or efforts to run away, complaining, unexplained crying, social isolation, poor communication, extreme sensitivity to rejection or failure. (Birmaher, et.al. 2006)
3. **Substance Abuse:** While estimates vary greatly, approximately 60-75% of bipolar disordered patients have significant substance abuse (SA). SA may mimic or exacerbate bipolar disorders. It is often obscure as to which disorder came first. Nevertheless, bipolar disorder clients need a careful assessment of SA patterns and history. Continued SA has a substantial and negative impact on the clinical course of bipolar disorders.
4. **Psychiatric Co morbidity:** Child and adolescent bipolar disorder is often co- morbid with attention deficit and conduct disorders. Early manifestations of mania and hypomania can be particularly difficult to distinguish from ongoing symptoms of ADHD. Mania in prepubescent children may be best differentiated from ADHD by the presence of euphoria, grandiosity, flight of ideas/racing thoughts, and decreased need for sleep. Approximately 10-15% of adolescents with recurrent Major Depressive Disorder will go on to develop Bipolar I Disorder. The first bipolar episode in girls is more likely to be a Major Depressive Disorder.
5. **Psychosocial Dimension:** As bipolar disorders are strongly genetic, family environments are often chaotic or abusive. Having a bipolar disordered child or adolescent may also create a tumultuous family environment. **CULTURAL CONSIDERATIONS**-persons from other cultures may have a tendency to discuss physical symptoms rather than mental health symptoms. They may mask symptoms with substance abuse or other medical problems. Asking questions, engaging with family and other natural supports of the person will aid in assessment and diagnosis.
6. **Age of Patient:** Community samples have shown a prevalence of bipolar spectrum disorders in children and adolescents as high as 6.7%. Some studies found the age of onset varying from infancy to 16 years of age, with a mean age of 6.7. Another study found the peak age of onset was between 15 and 19.
7. **Response to Previous Treatment:** Response to previously prescribed anti-depressants, mood stabilizers or psycho- stimulants can be beneficial in diagnosis and treatment. Given the genetic etiology of this disorder, family history of treatment responses is also beneficial.. *Outcomes Measure:* The Mood Disorder Questionnaire is a 13 item, self-report screening tool, which may be useful for diagnostic purposes. The Young Mania Rating Scale was found to be highly correlated with clinicians' independent assessment of the level of functioning. The KSADS-MRS (Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children-Mania Rating Scale) is a clinician-rated scale that measures manic symptom severity in children. It may be better than older scales in rating mania in children.

II. Communications

- A. *Between Provider and Patient:* Patients and their parents, caretakers, or other legal guardians, need to be informed of the diagnosis, it's etiology and prognostic implications. Patient and

parent or caretaker involvement with monitoring of mood symptoms is extremely beneficial. A sample mood chart is attached to this treatment guideline. It is important to emphasize that the patient may feel “good” or even “great” during the early phases of a manic episode and therefore not seek treatment unless convinced to by significant others. Involvement of patient’s family and school (when appropriate) is essential for accurate diagnosis and successful treatment monitoring.

- B. *Between Provider and Provider:* Information of the patient’s diagnosis and treatment plan needs to be shared with their primary care provider (PCP) to reduce the risk of the PCP inadvertently prescribing a medication that may exacerbate the mood disorder. Also, many of the mood stabilizers may interact with other medications including birth control pills.
- C. *Between Provider and Chart:* Providers need to chart diagnostic criteria validating the diagnosis, assessment for SA and potential for suicide/violence. Rationale for and responses to treatment interventions also need to be charted.

III. Treatment Plan

- A. *Goals:* Goals of treatment include patient and family education, reduction of disruptive and dangerous behaviors, improvement in relationship and coping skills to improve level of functioning, reduction of symptom distress levels for the patient, and increasing the ability of his/her caretakers to cope with symptoms.
- B. *Level of Care:* Level of care for the treatment of bipolar disorders will vary greatly depending upon the severity of the disorder. Usual criteria for level of care apply to this disorder.
- C. *Psychopharmacology:* Medication evaluation is mandatory for any bipolar disorder that results in significant impairment in level of functioning or safety. Mood stabilizers are the medication of choice, and polypharmacy is commonplace. Caution should be used in anti-depressant use. In general, treatment with a maintenance agent needs to continue for a minimum of 18 months after stabilization of a manic episode. There is evidence that maximal stabilization takes a number of years. Medication discontinuation needs to be done gradually and at a time of limited stressors, unless medically contraindicated (i.e. Severe allergic reaction).

Studies of valproic acid, lithium, and carbamazepine produce response rates ranging from 38% to 53%, and are generally well tolerated. Studies of atypical antipsychotic medication, specifically risperidone and olanzapine, have produced higher response rates (over 70%) but have been open-label trials and significant weight gain is noted as a side effect. When ADHD and bipolar disorder are both present, mood stabilization is a prerequisite before the ADHD can be effectively treated with stimulants.

As of late 2003, there have been only two double blind placebo controlled randomized study of pharmacotherapy in the treatment of adolescents with bipolar disorder. In one study, lithium was reported to have greater efficacy than placebo for the treatment of adolescents with comorbid bipolar and substance use disorders. In a second study, quetiapine in combination with divalproex resulted in a significantly greater response rate than divalproex monotherapy for the treatment of adolescent mania. Studies have consistently reported that approximately 50% of youth with bipolar disorder will respond to mood stabilizers alone. Open-label investigations of atypical antipsychotics as monotherapy for pediatric mania report response rates that range from 50-70%, suggesting that they may be at least as effective as mood stabilizers for the treatment of pediatric bipolar disorder.

The following information is largely based upon open studies, case reports, case series and adult studies:

- a. *Lithium:* (1) **Efficacy:** Improvement in mood lability, explosive outbursts, aggressive behavior, and psychosis have been demonstrated in several double blind, placebo controlled studies. In adult studies, lithium has been shown to be more effective in bipolar I disorders than in the other bipolar diagnoses. Psychotic

symptoms may require the adjunctive use of an antipsychotic medication. **Side effects:** Prominent side effects occur in up to 75% of patients and often include dystonia, thirst, polyuria, nausea, vomiting, tremor, fatigue, dizziness, weight gain and acne. (3) **Lab monitoring:** Renal and thyroid function tests, CBC, Calcium, and a pregnancy test is necessary before initiating lithium use. A baseline EKG may be obtained. Significant toxicity risk, hypothyroidism and renal damage are associated with lithium use. Laboratory monitoring of drug levels, thyroid panels and renal profiles need to occur a minimum of every 6 months.

- b. **Valproate/divalproex (Depakote):** (1) **Efficacy:** To date, there have been no double blind, placebo controlled studies of divalproex in children and adolescents though several show it's efficacy in adult bipolar disorders. Open studies show response rates in children and adolescents ranging from 60% to 83%. Another study shows divalproex to be equivalent to lithium in efficacy. (2) **Side effects:** Side effects occurring in >10% include headache, nausea, vomiting, diarrhea and somnolence. Weight gain is another potential side effect of concern. Toxicity in overdose is much less with divalproate than lithium. Rare though potentially fatal adverse events include irreversible hepatic failure (primarily in infants/toddlers), hemorrhagic pancreatitis (shown in developmental disability population) and agranulocytosis. (3) **Lab monitoring:** Baseline labs before initiating divalproate treatment need to include assessment for hepatic, hematologic and bleeding abnormalities. Hematologic panels, hepatic profiles and drug levels are generally done at least every 6 months although this recommendation is not universally recommended by experts in bipolar treatment. Monitoring for clinical signs of these serious side effects is mandatory.
- c. **Carbamazepine (Tegretol):** (1) **Efficacy:** Information regarding the use of carbamazepine in childhood bipolar disorder is limited to case reports. Its efficacy in adult bipolar disorders is well documented. (2) **Side effects:** Up to 50% of adult patients experience side effects. The most common dose related side effects are neurological, often transient and include diplopia, blurred vision, fatigue, nausea, vomiting, and ataxia. Less frequent side effects include skin rashes, mild leukopenia, mild thrombocytopenia, and hyponatremia (rare in children). Mild liver enzyme elevations occur in 5-15%. Weight gain is also a concern. Rare though potentially fatal side effects of carbamazepine include thrombocytopenia, agranulocytosis, aplastic anemia, hepatic failure, exfoliative dermatitis (i.e. Stevens Johnson syndrome), and pancreatitis. Carbamazepine may be fatal in overdose. (3) **Lab monitoring:** Routine blood monitoring does not reliably predict blood dyscrasias, hepatic failure or exfoliative dermatitis. Routine lab monitoring of drug level, hematologic profile, and hepatic panel are routinely done at least every 6 months and immediately if clinical signs suggest serious side effects. Carbamazepine is an auto-inducing agent, and therefore drug levels may decline over time. It also may increase or decrease the metabolism of several other medications.
- d. **Atypical antipsychotics:** While olanzapine is currently the only atypical antipsychotic with an FDA indication in the treatment of bipolar conditions, all of these agents have been used as primary or adjunctive treatment of bipolar conditions in children and adolescents. These agents, excluding clozapine, have the advantage of no mandatory lab monitoring. Hyperlipidemia, hyperglycemia, weight gain and sedation are risks with most of these agents, with the exception of ziprasidone. Patients on lithium who have psychotic features may be given atypical antipsychotics to effectively control the psychotic symptoms. However, the psychotic symptoms returned if the antipsychotic medication was discontinued in four weeks or less.
- e. **Newer anticonvulsants:** Many other anticonvulsants such as gabapentin, lamotrigine, oxcarbazepine, and topiramate are used in the treatment of bipolar conditions. Each has side effects and/or warnings that need to be taken into account. To date, gabapentin and topiramate are the ones that have data to support their efficacy in the treatment of bipolar conditions in children and adolescents.

- f. **Benzodiazepines:** Benzodiazepines may be helpful as adjunctive therapy or in the temporary stabilization of a bipolar condition. Caution must be used when these agents are used in the presence of substance abuse.
 - g. **Anti-depressants:** These medications need to be used with caution given their potential for inducing cycling in bipolar disorders. Many children and adolescents with bipolar conditions, especially girls, present initially with major depression. Education of the patient and family as to the risk of inducing cycling is especially helpful in monitoring for this risk.
- A. **Individual Therapy:** Skills based therapies are especially beneficial to assist the youth in coping with the extreme mood symptoms associated with bipolar disorders. Mood charting is helpful for increased awareness of patterns and potential triggers of the mood episodes. The association of psychosocial stressors and sleep patterns are especially beneficial. Awareness of early signs of relapse assists the early intervention and improved prognosis. Issues of medication compliance are also of value. Pharmacotherapy combined with child and family focused cognitive behavior therapies have been shown to be most effective when used together.
 - B. **Family Therapies:** As bipolar conditions are often of genetic origins, the likelihood of bipolar disorders within the immediate and extended family is high. Family intervention to create a more stable home environment may be indicated. The family benefits from education regarding the diagnosis, etiology and treatment of bipolar disorder. Encouraging stress management skills such as consistency, structure and routine may be useful. As family members are often aware of early signs and symptoms of a relapse before the patient, their involvement in monitoring this condition is essential and beneficial.
 - C. **Group Therapy:** The group environment is conducive for education and teaching of skills useful in coping with a bipolar disorder. Meeting with other children or adolescents with this diagnosis may assist in reducing issues of shame or stigmatization.
 - D. **Other:** The education and involvement of school staff in the treatment and monitoring of bipolar disorder in children and adolescents is of great importance. Communication with the primary care physician is also critical, especially when medications are being prescribed.

IV. Guideline Adherence Indicators: Documentation is mandatory in the patient chart of diagnostic criteria, consideration of co-morbid disorders, medication evaluation, assessment of dangerousness to self/others, communication with other clinicians/school, individual and family interventions. Charting of mood questionnaires and mood charting is encouraged.

V. References

AACAP Practice Parameters for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder; Journal of the American Academy of Child and Adolescent Psychiatry, [Vol. 36, Oct. 1997](#)

APA Practice Guideline for the Treatment of Patients with Bipolar Disorder (Revision) 2002

Barclay, L. & Vega, C. (2005, February). Consensus guidelines issued for diagnosis and treatment of bipolar disorder in children [21 paragraphs]. Medscape Medical News [On-line]. Available: <http://www.medscape.com/viewarticle/500273/500273>

Birmaher, B., Axelson, D., Stober, M., Gill, Mary Kay, Valeri, S., Chiappetta, L., Ryan, N., Leonard, H., Hunt, J., Iyengar, S., Keller, M. (2006, February). Clinical course of children and adolescents with bipolar spectrum disorders. [On-line]. JAMA&Archives, 63, 2. Abstract from: <http://archpsyc.ama-assn.org/cgi/content/abstract/63/2/175?>

Brigham, Peter: The Psychopharmacology of Bipolar Disorder. pbrig@mac.com 3/02

DSM-IV TR, Fourth Edition. American Psychiatric Association 2000

Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood. Zero to Three 1997

VI. Resources

<http://www.bpkids.org> - **Child & Adolescent Bipolar Foundation** website, a wealth of information for mental health professionals and a “lifeline of support and education for families raising children with bipolar disorder.” The website also has assessment Scales and Screening Tools, Practice Guidelines for Treatment of Bipolar Disorder, Peer Reviewed Scientific and Professional Journals (Most have the full text of the articles), Other Publications and Reports, and links to over 25 additional resources, The following sites are not specific for children and adolescents, but may be helpful:

<http://home.attbi.com/~pbrig> : Website maintained by Dr. Peter Brigham (pbrig@mac.com) with up to date information and resources primarily directed to clinicians.

<http://www.dbsalliance.org/> : Website of the Depression and Bipolar Support Alliance (DBSA), formerly the National Depressive and Manic Depressive Association, with resources and information for patients, families and clinicians. Bipolar disorder kit highly recommended.

<http://www.nimh.nih.gov/>: Website of the National Institutes of Mental Health