## P EDIATRIC BIPOLAR DISORDER

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#### Introduction

In recent years, there has been an explosion of interest among researchers and clinicians in the assessment, definition, diagnosis and treatment of pediatric bipolar disorder (PBD). According to the Center for Advancement of Children's Mental Health at Columbia University (2000), PBD is characterized by shifts of mood with severe highs (mania) and extreme lows (depression). Frequently the mood switches are rapid, but more typically are gradual. In a depressed episode, the child may have any or all of the symptoms of a depressive disorder. When in a manic episode, the child may be overactive, over talkative, and have a great deal of energy (Center for Advancement of Children's Mental Health at Columbia University).

PBD is currently one of the most debated disorders in youth mental health literature (Healy, 2006; McClellan, 2005). The more controversial issues are the core criteria for diagnosis, the need for discrete mood episodes and the definition of cycling (mood changes that occur during an episode) (Brown, Antonuccio, DuPaul, Fristad, King, Leslie et al., 2008, McClellan, Kowatch & Findling & the Workgroup on Quality Issues et al., 2007). Once considered a disorder occurring only in adults, the rate of PBD diagnosis has doubled in outpatient clinical settings, and quadrupled in community hospitals in the United States (Leibenluft & Rich, 2008). While the age of onset for PBD is unclear, studies have shown evidence of PBD as early as preschool age (Tumuluru, Weller, Fristad & Weller, 2003), and retrospective studies have identified PBD symptoms occurring in children age four and under (Dilsaver & Akiskal, 2004).

The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) classifies bipolar disorder as one of two categories of mood disorders (American Psychiatric Association [APA], 2000). This section, therefore, will occasionally use "Mood Disorder" in its discussion of PBD because the term is employed in the literature. A detailed review of the second category of Mood Disorders is available in the "Depression and Dysthymia" section of the *Collection*.

Depressive symptoms are common to all mood disorders as classified in the *DSM-IV-TR*, but symptoms of mania— inflated self-esteem, decreased need for sleep, and excessive engagement in risky pleasurable activities—help distinguish PBD from depressive disorders. The lifetime prevalence for mania is approximately 1 to 2% by late adolescence (Kessler, Avenevoli & Merikangas, 2001). Evidence indicates that PBD may also have a more severe course and poorer prognosis than bipolar disorder associated with older adolescent and adult-onset (Roberts, Bishop & Rooney, 2008).

#### **Diagnostic Issues and Categories**

There are four primary diagnostic categories on the bipolar spectrum (American Psychiatric Association [APA], 2000; Youngstrom, 2007):

- · Bipolar I Disorder;
- · Bipolar II Disorder;
- Cyclothymic Disorder; and
- Bipolar Disorder Not Otherwise Specified (NOS).

Unlike that for other, more common mental health disorders in youth, the exact diagnostic definition of PBD is still under debate. The latest American Academy of Child & Adolescent Psychiatry (AACAP) Practice

Parameters on PBD present two major diagnostic issues: whether these problems being seen in youth are best described as bipolar disorder; and whether juvenile mania is the same illness as mania seen in adults (Leibenluft et al., 2003; McClellan et al., 2007; McClellan, 2005). As stated previously, bipolar I disorder is rare in youth, whereas disorders classified as bipolar spectrum disorders and bipolar disorder not otherwise specified (BPD-NOS) are more common (Brown et al., 2008).

Characteristics of mania include extreme euphoria, grandiosity, and irritability, with associated racing thoughts, increased psychomotor activity and mood lability (Cassidy & Carroll, 2001). A diagnostic difficulty in PBD is that irritability, poor concentration, and increased motor activity are present in many different childhood disorders (Brown et al., 2008). Many researchers have proposed certain hallmark criteria or "handle" symptoms to help diagnosis of bipolar disorder in youth (Youngstrom, 2007). These criteria are grandiosity; decreased need for sleep; expansive or elated mood, which has been shown to be present in more than 80% of PBD cases (Kowatch, Youngstrom, Danielyan & Findling, 2005); and, although less common, hypersexuality. Youngstrom (2007) states, "...the case for PBD is most compelling when the symptoms occur together in episodes that are a distinct shift from the person's typical functioning."

In adolescents, mania is commonly associated with psychotic symptoms, rapidly changing moods and mixed manic and depressive features (Pavuluri, Birmaher & Naylor, 2005). Mania in younger children is usually defined by erratic changes in mood, energy levels, and behavior. Irritability, and mixed manic/depressive episodes are usually more common than euphoria (McClellan, Kowatch & Findling, 2007). Due to sparse evidence of the diagnostic validity of PBD in young children, the AACAP recommends extreme caution when diagnosing PBD in preschool age children (McClellan, Kowatch & Findling, 2007). Misdiagnosis can lead to unnecessary aggressive pharmacotherapy that has not been studied in young children.

According to McClellan et al. (2007), the *DSM-IV-TR* (APA, 2000) criteria and definitions as set out in the AACAP Practice Parameters are:

<u>Bipolar I disorder</u>: Requires the occurrence of a manic (or mixed) episode lasting at least one week, unless hospitalization is necessary. Depressive episodes are not required, but most youth diagnosed with BD experience major or minor episodes during their lifetime.

<u>Bipolar II disorder</u>: Requires the occurrence of major depression and hypomania (episodes lasting at least four days but does not meet the time criteria for mania) but no full manic or mixed manic episodes. <u>Cyclothymic disorder</u>: Requires at least two years of numerous periods of hypomanic symptoms that do not meet criteria for a manic episode and numerous periods of depressive symptoms that do not meet criteria for a major depressive episode.

<u>BPD-NOS</u>: Used for cases that do not meet full criteria for other bipolar diagnoses.

The *DSM-IV-TR* also includes two additional specifiers:

<u>Mixed episode</u>: Period lasting a week or more in which symptoms for both a manic and depressive episode are met; and

Rapid cycling: Occurrence of at least four mood episodes in one year. Episodes must still meet the required duration criteria.

Research has suggested two additional specifiers not in the DSM-IV-TR:

<u>Ultrarapid cycling</u>: Brief, frequent manic episodes lasting hours to days, but less than the 4-day duration criteria for hypomania; and

<u>Ultradian cycling</u>: Repeated, brief (minutes to hours) cycles that occur daily.

Adopting these criteria to assess, diagnose, and treat child-onset bipolar disorder is recommended in the AACAP Practice Parameters (McClellan et al., 2007). However, researchers recognize that the criteria need refinement for children and adolescents. The AACAP has issued guidelines stating that a diagnosis of BPD-NOS should be used when manic symptoms last for hours to fewer than four days and for chronic and impairing "manic-like symptoms" (Kowatch et al., 2005). Another diagnostic issue that clinicians should consider is that cyclothymia is rarely diagnosed in youth due to the prolonged duration criteria needed to make a diagnosis (Youngstrom et al., 2005). Youth who present clinically with a cyclothymic presentation are more often diagnosed with BPD-NOS.

## **Causes and Risk Factors**

Research has revealed that a family history of bipolar disorder is the strongest and most consistent risk factor for PBD. Heritability estimates have been shown to be as high as 85% (Roberts, Bishop & Rooney, 2008). According to Youngstrom (2007), out of 100 articles reviewed discussing more than 30 risk factors associated with PBD, family history was the only factor significant enough to warrant clinical interpretation.

The child of a bipolar parent is at four times more likely to develop PBD than a child of a non-bipolar parent (Miklowitz & Johnson, 2006).

The development of PBD has been found to be influenced by neurobiological factors: enlarged ventricles; an increase in white matter hyperintensities, specifically in the frontal cortex; and differences in central nervous system (CNS) and autonomic system activation and arousal (Roberts, Bishop & Rooney, 2008). Research has also revealed that increased levels of CNS activation, together with decreased autonomic arousal, can lead to difficulty regulating biological rhythms, affect and behavior, and can lead to decreased adaptation to contextual demands (Bar Haim, 2002, as cited in Roberts, Bishop & Rooney). The risk of developing PBD increases with the onset of puberty (Roberts, Bishop & Rooney).

Research has revealed a relationship between early age of onset with a greater likelihood of increased rapid cycling and higher rates of comorbidity, suicidality, violent behavior and substance abuse (Perlis et al., 2004 as cited in Youngstrom, 2007). Other risk factors associated with the development of PBD are:

- Psychosocial stressors, which interact with biological and/or genetic predisposition in eliciting episodes (Roberts, Bishop & Rooney, 2008);
- Poor peer relationships (Geller et al., 2000); and
- Early traumatic life events, which can lead to a more pernicious course (Leverich & Post, 2006).

Risk factors posed at home include poor family cohesion and high levels of conflict within the family (Chang, Blaser, Ketter & Steiner, 2001). Youth from families with a negative affective style are 5.9 times more likely to relapse than youth from families with a benign affective style (Miklowitz, Goldstein, Neuchterlein, Snyder & Mintz, 1988).

Factors found in the research to protect youth from PBD include: positive attributions in response to stressors for adolescents; intelligence, academic achievement; family cohesion, a warm and supportive caregiver and social competence (Roberts, Bishop & Rooney, 2008). Most studies have shown a lack of gender differences in the prevalence of PBD, but research has shown that males tend to exhibit mania more often, whereas females are more likely to present with depression (Duax, Youngstrom, Calabrese & Findling, 2007).

#### **Assessment**

Proper assessment of PBD in children is essential in early diagnosis, intervention and treatment. Evidence has shown that although symptoms may appear very early in a child, there is an average delay of diagnosis estimated to be around seven years (Faedda, Baldessarini, Glovinsky & Austin, 2004). Early intervention could lead to a better prognosis. Although no information on early intervention is available in the PBD literature, adult studies have found that a

longer delay from the first appearance of symptoms to treatment was associated with an increase in hospitalizations, decreases in social adjustment and a greater risk of suicidal behaviors (Goldberg & Ernst, 2002).

Youngstrom (2007) listed a set of "red flags" that should trigger assessment for possible bipolar disorder. These are summarized in Table 1.

Table 1

Red Flags which Trigger Assessment for Pediatric Bipolar Disorder

Red Flag	Description
Early-onset depression	Depressive disorder during adolescence
Psychotic features	True delusions or hallucinations related to mood
Episodic aggressive behavior	Though not a symptom of bipolar, such episodes
	are common to youth with bipolar
Family history of bipolar disorder	Family studies show highly increased risk
Atypical depression	Unusual symptom presentation such as
	hypersomnia, increased appetite, interpersonal
	rejection sensitivity

Source: Youngstrom, 2007.

The AACAP Practice Parameters for PBD recommend a comprehensive, multi-informant assessment procedure. Clinicians should attempt to acquire assessment information from youth, parents, and teachers (McClellan et al., 2007). During the initial assessment period, clinicians should obtain a thorough family medical and psychological history, and choose both broadband (general screening tools) and narrowband measures (specific to disorder) in order to rule in/out other possible diagnoses or comorbid disorders. Most youth with PBD have at least one other co-occurring disorder. Misdiagnosis of major depressive disorder (MDD) or attention deficit hyperactivity disorder (ADHD) and subsequent treatment with antidepressants or psychostimulants can cause a switch to a manic episode and earlier onset of PBD (DelBello et al., 2001). Unnecessary exposure to medications that have not been well-studied in youth can also lead to serious side effects (Findling et al., 2004). Youngstrom states that assessment should also include measures of hypomanic/manic and depressed symptoms (2007).

One of the first steps in assessment should include an examination by a primary care provider to rule out any medical reason for the youth's change from normal behavior. Many medical conditions, such as hyperthyroidism, epilepsy and head trauma, can induce mania or look like symptoms of mania (Fields & Fristad, 2008). Once medical conditions have been ruled out, a clinician should attempt to gain a longitudinal perspective to document the course of the disorder. Obtaining a baseline for normal behavior is important to determine a meaningful change in this behavior. Having a parent fill out a mood log, where they track their child's mood and energy for a certain number of weeks, is a good way for a clinician to determine specific mood episodes and whether or not a child meets time-length criteria for specific PBD symptoms (Youngstrom, 2007). On-going assessment and reevaluation after the initial diagnosis is critical in PBD diagnosis (Youngstrom, Findling, Youngstrom & Calabrese, 2005).

Some of the broadband and narrowband assessment tools available for clinicians to use in the assessment of PBD are:

- Behavior checklists, such as Achenbach's Child Behavior Checklist (CBCL) (Achenbach, 1991);
- Clinical rating scales like the K-SADS-Mania Rating Scale (K-MRS) (Axelson et al., 2003) or the Young Mania Rating Scale (Young, Biggs, Ziegler & Meyer, 1978);
- · Mood rating scales; and
- WASH-U-KSADS (Geller et al., 2001), a semi-structured interview with an expanded mania symptoms section.

The Externalizing scale score on the CBCL is a useful screening tool, evidenced across multiple studies, allowing clinicians to screen for PBD quickly (Kahana, Youngstrom, Findling & Calabrese, 2003; Youngstrom et al., 2004; Youngstrom, Youngstrom & Starr, 2005). According to Youngstrom (2007), "if concerned about potential PBD, then the Externalizing score is the main CBCL score to consider in terms of changing diagnostic impression." Although the scale score is sensitive to PBD, it is not specific due to a lack of a mania scale. Because of this, low Externalizing scale scores usually help clinicians to rule out PBD as a diagnosis (Youngstrom, 2007). A high score, however, does not rule in a child, instead suggesting the need for further PBD diagnostic assessment. The measure is a screening tool and, due to its lack of specificity, should not be the sole basis for a PBD diagnosis. Table 2 lists the suggested assessment tools for PBD.

Knowledge of how developmental and cultural factors impact assessment and diagnosis is crucial to proper assessment. In youth, developmental issues must be considered in order for the clinician to interpret clinical data, as well as age-appropriate behavior. It is also imperative that the clinician assesses not only symptoms, but also functional impairment. The U.S. Department of Health and Human Services (1999) asserts that mood disorders dramatically increase the risk of suicide. On-going assessment of suicide risk is important due to the high risk of suicide attempt among youth with PBD; estimates show that 25 to 50% of youth with PBD will attempt suicide, and 20% will succeed (Faust, Walker & Sands, 2006). A review of suicide assessment tools is provided in the "Youth Suicide" section of the *Collection*.

#### Comorbidity

Similar to the adult bipolar disorder literature, various research studies have shown that children and adolescents suffering from PBD have very high rates of comorbidity with other psychological disorders (Kessler, 1999; Kowatch et al., 2005), the most common being attention deficit hyperactivity disorder (ADHD) (e.g., Biederman et al., 2004; Masi et al., 2006; Youngstrom et al., 2005), oppositional defiant disorder (ODD) (Youngstrom et al., 2005), conduct disorder (Lewinsohn et al., 2002), and anxiety disorders (Harpold et al., 2005). Psychosis has also been shown to be comorbid with PBD as well (Biederman et al., 2004).

Evidence has shown that as many as 60 to 90% of youth with PBD have comorbid ADHD (Axelson et al., 2006), and as many as 78% of youth have comorbid anxiety disorders (Harpold et al., 2005). Some

researchers attribute these high rates to an overlap in diagnostic criteria for the two disorders (Youngstrom, 2007). Despite the overlap in criteria, PBD youth with comorbid ADHD and/or anxiety disorders often show greater functional impairment and a worse prognosis (Youngstrom).

Table 2

Suggested Assessment Tools

Measure Type	Name of Measure	Who Completes	Data Generated
Clinical Interview	Washington University version of the Kiddie-Schedule for Affective Disorders and Schizophrenia	Clinician with Youth & Parent	Diagnoses
Clinical Interview	The Children's Interview for Psychiatric Syndromes (ChIPS)	Clinician with Youth & Parent	Diagnoses
Clinical Interview	Mini-International Neuropsychiatric Interview (MINI)	Parent	Diagnoses
Rating Scale	Mood Disorder Questionnaire (MDQ)	Parent or Youth	Symptom ratings
Behavior Checklist	Child Behavior Checklist (CBCL)	Parent	Syndrome scale scores; Competence scores
Behavior Checklist	Youth Self-Report (YSR)	Youth	Syndrome scale scores; Competence scores
Rating Scale	General Behavior Inventory (GBI)	Parent or Youth	Symptom ratings
Rating Scale	Young Mania Rating Scale	Clinician or Parent	Symptom ratings
Rating Scale	Pediatric Quality of Life Inventory (PedsQL)	Parent or Youth	Child functioning ratings

Source: Youngstrom, 2007.

#### **Evidence-based Treatments**

The AACAP Practice Parameters for treatment of early-onset bipolar disorder provide a comprehensive, multimodal combination of both psychopharmacology and psychosocial therapies (McClellan et al., 2007). The AACAP also advises that treatment should be tailored and based on several different factors, including treatment setting, the chronic nature of the disorder, the age of the child, and the family environment. The goals of therapy, as set out by the AACAP, are to reduce symptoms, educate about the illness, and promote adherence to treatment, which works towards preventing relapse, and promotes normal growth and development in youth with PBD (McClellan et al.). Currently, there are no pharmacological or psychosocial therapies with enough evidence in youth samples to meet the standards for empirically-supported treatments (Chambless & Hollon, 1998, as cited by Youngstrom, 2007).

Practice guidelines indicate medication as the central component of first-line intervention for bipolar disorder (Youngstrom & Kendall, 2008). The goal is to immediately reduce the severity of symptoms (Leibenluft & Rich, 2008).

#### Pharmacological Treatments

Pharmacological treatment of children diagnosed with bipolar disorder is modeled after treatment experiences with adults since there are few controlled trials or studies of the efficacy and safety of psychopharmacological medications for youth with PBD (National Institute for Mental Health [NIMH], 2000; Roberts, Bishop & Rooney, 2008). The AACAP Practice Parameters suggest that treatment for PBD begin with lithium, another anticonvulsant/mood stabilizer or an atypical antipsychotic which has been approved by the FDA for bipolar disorder in adults (McClellan et al., 2007). Although the number of studies including children and adolescents remains quite small, preliminary evidence suggests that a combination of mood stabilizers/anticonvulsants and second generation antipsychotics has been shown effective in placebo

controlled trials for treating acute symptoms of PBD and for stabilization of symptoms up to six months after the studies were complete (Miklowitz & Johnson, 2006; Pavuluri, Birmaher & Naylor, 2005).

Lithium is currently the most extensively studied medication for use with PBD (Findling & Pavuluri, 2008; Kowatch et al., 2005; Kafantaris, Coletti, Dicker, Padula & Kane, 2001, 2003; Pavuluri, Birmaher & Naylor 2005). Lithium is the only PBD treatment medication approved by the FDA for use in youth (Pavuluri Birmaher & Naylor). However, youth experience the same safety problems with lithium that adults may experience, such as toxicity and impairment of renal and thyroid functioning (Geller & Luby, 1997). Lithium is not recommended for families unable to keep regular appointments, which are necessary to ensure monitoring of serum lithium levels in the blood and of conflicting side effects. Relapse is also high for those youth who discontinue the medication. Divalproex sodium (Kowatch et al., 2000; Wagner et al., 2002), Clozapine (Kowatch et al., 1995; Kafantaris, Coletti, Dicker, Padula & Kaffne, 2001), Risperidone (Kafantaris et al., 2001), combined with lithium (Pavuluri, Birmaher & Naylor), Olanzapine (Frazier et al., 2001; Pavuluri, Birmaher & Naylor), and Quetiapine (Delbello et al., 2006) have also been shown to improve symptoms in youth with PBD. Table 3 divides the psychopharmacological treatments for PBD into two categories: What Works and What Seems to Work.

Table 3
Psychopharmacological Treatments for PBD

What Works		
Currently no medications meet the criteria for a drug that works.		
What Seems to Work		
Mood stabilizers/ Anticonvulsants		
Second-generation antipsychotics		

Sources: Roberts, Bishop & Rooney, 2008; Brown et al., 2008.

## **Unproven Treatments**

Interpersonal social rhythm therapy (IPSRT) (Frank, Swartz & Kupfer, 2000) has shown some evidence of support in adult studies. IPSRT works to minimize the effects of life stressors by helping youth establish regular patterns of sleep, exercise and social interactions (Leibenluft & Rich, 2008). There is no current evidence of its usefulness in PBD, but current research is studying a version of IPSRT for PBD youth ages 12 to 18 (Hlastala & Frank, 2006). The use of Omega-3 fatty acids, as well as complementary and alternative medicines as treatments, will need additional rigorous study before their benefit for PBD is determined (Scheffer, 2008).

The NIMH (2000) emphasizes that using antidepressants to treat depression in a child with bipolar disorder may induce manic symptoms if it is taken without a mood stabilizer, such as lithium or valproate. Also, psychostimulant medications used in treating co-occurring ADHD in a child with bipolar disorder may exacerbate manic symptoms as well (Focus Adolescent Services, 2000). The child's psychiatrist should be consulted if this occurs and treatment for bipolar disorder may need to be reevaluated.

#### Psychosocial Treatments

Although no psychosocial treatments for PBD are considered evidence-based (Chambless & Hollon, 1998), recent evidence has shown that family-focused psychoeducational therapy (FFT) (Miklowitz et al., 2004), child- and family-focused Cognitive Behavioral Therapy (CFF-CBT) (Pavuluri et al., 2004), and multifamily psychoeducation groups MFPG; Fristad, Goldberg-Arnold & Gavazzi, 2002; Fristad, Gavazzi & Mackinaw-Koons, 2003) show promise as adjunctive treatments to pharmacological treatment (Youngstrom, 2007). These three treatments have demonstrated symptom improvement and increased functioning in youth with PBD. Table 4 lists the psychosocial treatments for PBD into two categories: What Works and What Seems to Work.

Table 4

## **Psychosocial Treatments for PBD**

What Works	Description
Currently no psychological treatments	Not applicable.
meet criteria.	
What Seems to Work	Description
Family-focused Psychoeducational	Helps youth make sense of their illness and
Therapy (FFT; Miklowitz et al., 2004)	accept it and also to better understand use of
	medication. Also helps to manage stress, reduce
	negative life events, and promote a positive
	family environment.
Child- and Family-Focused Cognitive	Emphasizes individual psychotherapy with youth
Behavioral Therapy (CFF-CBT;	and parents, parent training and support, and
Pavuluri et al., 2004)	family therapy
Multifamily Psychoeducation Groups	Youth and parent group therapy have been
(MFPG; Fristad, Goldberg-Arnold &	shown to increase parental knowledge, promote
Gavazzi, 2002; Fristad, Gavazzi &	greater access to services, and increase parental
Mackinaw-Koons, 2003)	social support for youth.

Sources: Roberts, Bishop & Rooney, 2008; Leibenluft & Rich, 2008.

#### **Cultural Considerations**

When assessing, diagnosing and treating youth with mental health disorders, it is imperative that a clinician take into consideration the youth's cultural background. Different cultures may have different beliefs about psychological issues, which should inform clinical judgment and decision-making. Due to these differences, when assessing minority youth, clinicians should gather family history data at the symptom level, if possible, and be cautious about face value interpretation due to the potential for cultural bias (Garb, 1998).

Unfortunately, little is presented in the PBD literature about cultural differences in the prevalence or presentation of the disorder. Small sample sizes in treatment studies to date have not allowed for comparisons based on racial or ethnic groups (Brown et al., 2008). Mood disorder research has shown, however, that minority youth have a higher chance of being misdiagnosed with a behavior disorder or schizophrenia (DelBello, Lopez-Larson, Soutullo & Strakowski, 2001). Due to this risk of misdiagnosis, a clinician should carefully assess for a mood disorder in minority youth, especially when the presenting complaint includes symptoms of a behavior disorder or psychosis (Youngstrom, 2007).

## **Sources**

- Achenbach, T. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
- American Psychiatric Association (APA). (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.) (DSM-IV-TR). Washington, DC: Author.
- Axelson, D., Birmaher, B., Brent, D., Wassick, S., Hoover, C., Bridge, J., & Ryan, N. (2003). A preliminary study of the Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children mania rating scale for children and adolescents. *Journal of Child and Adolescent Psychopharmacology, 13*, 463-470.
- Axelson, D., Birmaher, B., Strober, M., Gill, M., Valeri, S., et al. (2006). Phenomenology of children and adolescents with bipolar spectrum disorders. *Archives of General Psychiatry, 63,* 1139-1148.
- Biederman, J., Faraone, S., Wozniak, J., Mick, E., Kwon, A., & Aleardi, M. (2004). Further evidence of unique developmental phenotypic correlates of pediatric bipolar disorder: Findings from a large sample of clinically referred pre-adolescent children assessed over the last 7 years. *Journal of Affective Disorders*, 82 (Suppl.1), S45-S58.

- Brown, R., Antonuccio, D., DuPaul, G., Fristad, M., King, C., Leslie, L., et al. (2008). Bipolar disorder. *Childhood mental health disorders: Evidence base and contextual factors for psychosocial, psychopharmacological, and combined interventions* (pp. 87-96). Washington, DC: American Psychological Association.
- Cassidy, F., & Carroll, B. (2001). Frequencies of signs and symptoms in mixed and pure episodes of mania: Implications for the study of manic episodes. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *25*, 659-665.
- Center for the Advancement of Children's Mental Health at Columbia University. (2000). *Depression*. [Online]. Available: http://www.kidsmentalhealth.org. *Not available January 2008*.
- Chambless, D., & Hollon, S. (1998). Defining empirically supported therapies. *Journal of Consulting and Clinical Psychology*, *66*, 7-18.
- Chang, K., Blaser, C., Ketter, T., & Steiner, H. (2001). Family environment of children and adolescents with bipolar disorder parents, *Bipolar Disorders*, *3*, 73-78.
- DelBello, M., Kowatch, R., Adler, C., Stanford, K., Welge, et al. (2006). A double-blind randomized pilot study comparing quetiapine and divalproex for adolescent mania. *Journal of the American Academy of Child and Adolescent Psychiatry*, *45*, 305-313.
- DelBello, M., Lopez-Larson, M., Soutullo, C., & Strakowski, S. (2001). Effects of race on psychiatric diagnosis of hospitalized adolescents: A retrospective chart review. *Journal of Child and Adolescent Psychopharmacology*, 11, 95-103.
- DelBello, M., Soutullo, C., Hendricks, W., Niemeier, R., McElroy, S., & Strakowski, S. (2001). Prior stimulant treatment in adolescents with bipolar disorder: association with age at onset. *Bipolar Disorders* 3, 53-57.
- Dilsaver, S., & Akiskal, H. (2004). Preschool-onset mania: incidence, phenomenology, and family history. *Journal of Affective Disorders* 82 (Suppl.), S35-S43.
- Duax, J., Youngstrom, E., Calabrese, J., & Findling, R. (2007). Sex differences in pediatric bipolar disorder. *Journal of Clinical Psychiatry*, 68, 1565-1573.
- Faedda, G., Baldessarini, R., Glovinsky, I., & Austin, N. (2004). Treatment-emergent mania in pediatric bipolar disorder: a retrospective case review. *Journal of Affective Disorders*, *82*, 149-158.
- Faust, D., Walker, D., & Sands, M. (2006). Diagnosis and management of childhood bipolar disorder in the primary care setting. *Clinical Pediatrics*, *45*, 801-808.
- Fields, B., & Fristad, M. (2008). Assessment of childhood bipolar disorder. *Clinical Psychology Science and Practice*, *16*, 166-181.
- Findling, R., Aman, M., Eerdekens, M., Derivan, A., Lyons, B., & Risperidone Disruptive Behavior Study Group. (2004). Long-term, open-label study of risperidone in children with severe disruptive behaviors and below-average IQ. *American Journal of Psychiatry*, *161*, 677-684.
- Findling, R., & Pavuluri, M. (2008). Lithium. In B. Geller & M. DelBello (Eds.), *Treatment of bipolar disorder in children and adolescents* (pp. 43-68). New York: Guilford Press.
- Focus Adolescent Services. (2000). *What is Bipolar Disorder?* [Online]. Available: http://www.focusas.com/BipolarDisorder.html. [January 2011].
- Frank, E., Swartz, H., & Kupfer, D. (2000). Interpersonal and social rhythm therapy: managing the chaos of bipolar disorder. *Biological Psychiatry*, *48*, 593-604.
- Frazier, J., Biederman, J., Tohen, M., Feldman, P., Jacobs, T., Toma, V., et al. (2001). A prospective open-label treatment trial of olanzapine monotherapy in children and adolescents with bipolar disorder. *Journal of Child and Adolescent Psychopharmacology*, *11*, 239-250.

- Frazier, T., Demeter, C., Youngstrom, E., Calabrese, J., Stansbrey, R., McNamara, N., & Findling, R. (2007). Evaluation and comparison of psychometric instruments for pediatric bipolar spectrum disorders in four age groups. *Journal of Child and Adolescent Psychopharmacology*, 17, 853-866.
- Fristad, M., Gavazzi, S., & Mackinaw-Koons, B. (2003). Family psychoeducation: an adjunctive intervention for children with bipolar disorder. *Biological Psychiatry*, *53*, 1000-1008.
- Fristad, M., Goldberg-Arnold, J., & Gavazzi, S. (2002). Multifamily psychoeducation groups (MFPG) for families of children with bipolar disorder. *Bipolar Disorders*, *4*, 254-262.
- Garb, H. (1998). Studying the clinician: Judgment research and psychological assessment. Washington, DC: American Psychological Association.
- Geller, B., & Luby, J. (1997). Child and adolescent bipolar disorder: a review of the past 10 years. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 461-468.
- Geller, B., Zimerman, B., Williams, M., Bolhofner, K., Craney, J., Delbello, M., & Soutullo, C. (2000). Diagnostic characteristics of 93 cases of prepubertal and early adolescent bipolar disorder phenotype by gender, puberty and comorbid attention deficit hyperactivity disorder. *Journal of Child and Adolescent Psychopharmacology*, 10, 157-164.
- Geller, B., Zimerman, B., Williams, M., Bolhofner, K., Craney, J., Delbello, M., et al. (2001). Reliability of the Washington University in St. Louis Kiddie Schedule for Affective Disorders and Schizophrenia (WASH-U-KSADS) mania and rapid cycling sections. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40, 450-455.
- Goldberg, J., & Ernst, C. (2002). Features associated with the delayed initiation of mood stabilizers at illness onset in bipolar disorder. *Journal of Clinical Psychiatry*, *63*, 985-991.
- Harpold, T. Wozniak, J., Kwon, A., Gilbert, J., Wood, J., et al. (2005). Examining the association between pediatric bipolar disorder and anxiety disorders in psychiatrically referred children and adolescents. *Journal of Affective Disorders*, 88 (1), 19-26.
- Healy, D. (2006). The latest mania: Selling bipolar disorder. PLoS Medicine, 3, e185.
- Hlastala, S., & Frank, E. (2006). Adapting interpersonal and social rhythm therapy to the developmental needs of adolescents with bipolar disorder. *Developmental Psychopathology, 18,* 1267-1288.
- Kafantaris, V., Coletti, D., Dicker, R., Padula, G., & Kane, J. (2001). Adjunctive antipsychotic treatment of adolescents with bipolar psychosis. *Journal of the American Academy of Child and Adolescent Psychiatry, 40,* 1448-1456.
- Kafantaris, V., Coletti, D., Dicker, R., Padula, G., & Kane, J. (2003). Lithium treatment of acute mania in adolescents: A large open trial. *Journal of the American Academy of Child and Adolescent Psychiatry*, 42, 1038-1045.
- Kahana, S., Youngstrom, E. Findling, R., & Calabrese, J. (2003). Employing parent, teacher, and youth self-report checklists in indentifying pediatric bipolar spectrum disorders: An examination of diagnostic accuracy and clinical utility. *Journal of Child and Adolescent Psychopharmacology, 13,* 471-488.
- Kessler, R. (1999). Comorbidity of unipolar and bipolar depression with other psychiatric disorders in a general population survey. In M. Tohen (Ed.), *Comorbidity in affective disorders* (pp. 1-25). New York: Marcel Dekker.
- Kessler, R., Avenevoli, S., & Merikangas, K. (2001). Mood disorders in children and adolescents: An epidemiological perspective. *Biological Psychiatry*, *49*, 1002-1014.
- Kowatch, R., Fristad, M., Birmaher, B., Wagner, K., Findling, R., & Hellander, M. (2005). Treatment guidelines for children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 44*, 213-235.

- Kowatch, R., Suppes, T., Carmody, T., Bucci, J., Hume, J., Kromelis, M., Emslie, G., Weinberg, W., & Rush, A. (2000). Effect size of lithium, divalproex sodium, and carbamazepine in children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 713-720.
- Kowatch, R., Suppes, T., Gilfillan, S., Fuentes, R., Granneman, B., & Emslie, G. (1995). Clozapine treatment of children and adolescents with bipolar disorder and schizophrenia: A clinical case series. *Journal of Child and Adolescent Psychopharmacology*, *5*, 241-253.
- Kowatch, R., Youngstrom, E., Danielyan, A., & Findling, R. (2005). Review and meta-analysis of the phenomenology and clinical characteristics of mania in children and adolescents. *Bipolar Disorders*, *7*, 483-496.
- Leibenluft, E., Charney, D., Towbin, K., Bhangoo, R., & Pine, D. (2003). Defining clinical phenotypes of juvenile mania. *American Journal of Psychiatry*, *160*, 430-437.
- Leibenluft, E., & Rich, B. (2008). Pediatric bipolar disorder. *Annual Review of Clinical Psychology, 4,* 163-187.
- Leverich, G., & Post, R. (2006). Courses of bipolar illness after a history of childhood trauma. *The Lancet*, 367. 1040-1042.
- Lewinsohn, P., Seeley, J., Buckley, M., & Klein, D. (2002). Bipolar disorder in adolescence and young adulthood. *Child and Adolescent Psychiatry Clinics of North America*, 11 (3), 461-475.
- McClellan, J. (2005). Commentary: Treatment guidelines for child and adolescent bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 44, 236-239.
- McClellan, J., Kowatch, R., & Findling, R., & the Workgroup on Quality Issues et al. (2007). Practice parameter for the assessment and treatment of children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry 46*, 107-125.
- Masi, G., Perugi, G., Toni, C., Millepiedi, S., Mucci, M., Bertini, N., et al. (2006). Attention-deficit hyperactivity disorder Bipolar comorbidity in children and adolescents. *Bipolar Disorders*, *8*, 373-381.
- Miklowitz, D., & Johnson, S. (2006). The psychopathology of bipolar disorder. *Annual Review of Clinical Psychology*, *2*, 199-235.
- Miklowitz, D., George, E., Axelson, D., Kim, E., Birmaher, B., et al. (2004). Family-focused treatment for adolescents with bipolar disorder. *Journal of Affective Disorders*, 82 (Suppl. 1), S113–S128.
- Miklowitz, D., Goldstein, M., Nuechterlein, K., Synder, K., & Mintz, J. (1988). Family factors and the course of bipolar affective disorder. *Archives of General Psychiatry*, *45*, 225-231.
- National Institute of Mental Health (NIMH). (2000). *Depression in Children and Adolescents. NIH Publication No. 00-4744.*
- Pavuluri, M., Birmaher, B., & Naylor, M. (2005). Pediatric bipolar disorder: A review of the past 10 years. Journal of the American Academy of Child and Adolescent Psychiatry, 44, 846-871.
- Pavuluri, M., Graczyk, P., Henry, D., Carbray, J., Heidenreich, J., & Miklowitz, D. (2004). Child- and family-focused cognitive-behavioral therapy for pediatric bipolar disorder: development and preliminary results. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43, 528-537.
- Pavuluri, M., Henry, D., Carbray, J., Sampson, G., Naylor, M., & Janicak, P. (2006). A one-year open-label trial of risperidone augmentation in lithium nonresponder youth with preschool-onset bipolar disorder. *Journal of Child and Adolescent Psychopharmacology*, *16*, 336-350.
- Roberts, C., Bishop, B., & Rooney, R. (2008). Depression and bipolar disorder in childhood. In T.P. Gullotta & G.M. Blau (Eds.), *Handbook of childhood behavioral issues: Evidence-based approaches to prevention and treatment* (pp. 239-271). New York: Routledge.

- Scheffer, R. (2008). Nonpharmacological biological treatment for pediatric bipolar disorder: Omega-3 fatty acids and complementary and alternative medicine. In B. Geller & M.P. DelBello (Eds.), *Treatment of bipolar disorder in children and adolescents* (pp. 153-165). New York: Guilford Press.
- Tumuluru, R., Weller, E., Fristad, M., & Weller, R. (2003). Mania in six preschool children. *Journal of Child and Adolescent Psychopharmacology*, *13*, 489-494.
- U.S. Department of Health and Human Services. (1999). *Mental Health: A Report of the Surgeon General*. Rockville, MD.
- Wagner, K., Weller, E., Carlson, G., Sachs, G., Biederman, J., et al. (2002). An open-label trial of divalproex in children and adolescents with bipolar disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 41, 1224-1230.
- Young, R., Biggs, J., Ziegler, M., & Meyer, D. (1978). A rating scale for mania: Reliability, validity, and sensitivity. *British Journal of Psychiatry*, 133, 429-435.
- Youngstrom, E. (2007). Pediatric bipolar disorder. In E. J. Mash & R. A. Barkley (Eds.), *Assessment of childhood disorders* (4<sup>th</sup> ed., pp. 253-304). New York: Guilford Press.
- Youngstrom, E., Findling, R., Calabrese, J., Gracious, B., Demeter, C., et al. (2004). Comparing the diagnostic accuracy of six potential screening instruments for bipolar disorder in youth aged 5 to 17 years. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 847-858.
- Youngstrom, E., Findling, R., Youngstrom, J., & Calabrese, J. (2005). Toward an evidence-based assessment of pediatric bipolar disorder. *Journal of Clinical Child and Adolescent Psychiatry*, *34*, 433-448.
- Youngstrom, E., & Kendall, P. (2008). Psychological science and bipolar disorder. *Clinical Psychology Science and Practice*, *16*, 93-97.
- Youngstrom, E., Meyers, O., Demeter, C., Youngstrom, J., Morello, L., et al. (2005). Comparing diagnostic checklists for pediatric bipolar disorder in academic and community mental health settings. *Bipolar Disorders*, 7 (6), 507-517.
- Youngstrom, E., Youngstrom, J., & Starr, M. (2005). Bipolar diagnoses in community mental health: Achenbach CBCL profiles and patterns of comorbidity. *Biological Psychiatry*, *58*, 569-575.

#### **Additional Resources**

- Gleason, M., Egger, H., Graham, E., Greenhill, L., Kowatch, R., et al. (2007). Psychopharmacological Treatment for Very Young Children: Contexts and Guidelines. Special Communication. *Journal of the American Academy of Child and Adolescent Psychiatry*, *4*6 (12), 1532-1572.
- Jones, J. (2010). Identifying youth at high risk for bipolar disorder. Research reported in *Journal of Affective Disorders*, July 8, 2010. [Online]. Available: http://psychcentral.com/news/2010/07/20/identifying-youth-at-high-risk-for-bipolar-disorder/15805.html. [August 2010].
- Parens, E., & Johnston, J. (2010). Controversies concerning the diagnosis and treatment of bipolar disorder in children. *Child and Adolescent Psychiatry and Mental Health, 4* (9). [Online]. Available: http://www.capmh.com/content/4/1/9. [August 2010].

#### Organizations/Resources

#### American Academy of Child & Adolescent Psychiatry (AACAP)

3615 Wisconsin Avenue, NW — Washington, DC 20016-3007

http://www.aacap.org

http://www.aacap.org/page.ww?name=Bipolar+Disorder+In+Children+And+Teens&section=Facts+for+Families

http://www.aacap.org/cs/root/member\_information/practice\_information/practice\_parameters/practice\_parameters

ParentsMedGuide.org

Bipolar Disorder—Parents' Medication Guide for Bipolar Disorder in Children & Adolescents. http://www.aacap.org/galleries/default-file/aacap\_bipolar\_medication\_guide.pdf

#### American Foundation for Suicide Prevention (AFSP)

http://www.afsp.org

#### **Bipolar Kids Home**

http://www.geocities.com/EnchantedForest/1068

#### Center for Effective Collaboration and Practice (CECP)

1000 Thomas Jefferson Street, NW, Suite 400 — Washington, DC 20007 http://cecp.air.org

#### Center for Excellence in Research and Treatment of Bipolar Disorder (CERT-BD)

http://www.med.unc.edu/psych/cert-bd

#### **Child & Adolescent Bipolar Foundation**

1187 Wilmette Avenue, P.M.B. #331 — Wilmette, IL 60091 http://www.bpkids.org

Flipswitch (podcast and blog for teens and 20s to understand depression and bipolar disorder) http://www.bpkids.org/flipswitch

# **Depression and Bipolar Support Alliance (DBSA)** (formerly the National Depressive and Manic Depressive Association)

730 Franklin Street, Suite 501 — Chicago, IL 60610 http://www.dbsalliance.org

#### Depression and Related Affective Disorders Association (DRADA)

2330 West Joppa Road, Suite 100 — Lutherville, MD 21093-4605 http://www.goldbamboo.com/entity-e1732.html

#### **Evidence-based Mental Health Treatment for Children and Adolescents**

www.effectivechildtherapy.com

#### **Federation of Families for Children's Mental Health**

http://www.ffcmh.org

#### **Georgetown University Center for Child and Human Development**

http://gucchd.georgetown.edu

### Juvenile Bipolar Research Foundation

550 Ridgewood Road — Maplewood, NJ 07040 http://www.bpchildresearch.org/about/index.html

#### Mental Health America (MHA) (formerly National Mental Health Association)

http://www.nmha.org/index.cfm?objectid=ca866daf-1372-4d20-c8023899e7497020

#### **Ryan Licht Sang Bipolar Foundation**

http://www.ryanlichtsangbipolarfoundation.org/site/c.ltJZJ8MMIsE/b.2107311/k.BCD3/Home.htm

#### U.S. Department of Health and Human Services

National Institute of Mental Health (NIMH)

Bipolar Disorder in Children and Teens: A Parents Guide (2008)

http://www.nimh.nih.gov/health/publications/bipolar-disorder-in-children-and-teens-a-parents-guide/nimh\_bipolar\_children\_parents\_guide.pdf

Easy to Read Guide for Parents

http://www.nimh.nih.gov/health/publications/bipolar-disorder-in-children-and-teens-easy-to-read/index.shtml

#### **Wisconsin United for Mental Health**

http://www.wimentalhealth.org/disorders/mood\_disorders/bipolar\_disorder.php