

## Pediatric Bipolar Disorder

Childhood mental health is a serious and growing concern in the United States. According to the National Institute of Mental Health, one in ten children in this country suffers from a mental disorder severe enough to cause some level of social, behavioral, and/or academic impairment, yet fewer than one in five children with a psychiatric illness receives treatment. Those that are treated often receive psychotropic medication that has not been thoroughly tested for safety and efficacy in children.

Bipolar disorder is one example of a serious illness that has not been adequately characterized in children. The term “bipolar disorder” describes a spectrum of chronic, debilitating psychiatric illnesses. It is characterized by mood episodes that can alternate from extreme highs (mania) to lows (depression) within hours or days, or even months and years. Symptoms of bipolar disorder can interfere with a child’s developmentally appropriate functioning at home, at school, and with peers. Children with bipolar disorder are at risk for academic failure, addiction, and even suicide.

The Child & Adolescent Bipolar Foundation (CABF) estimates that at least 750,000 American children and teenagers currently suffer from bipolar disorder. The majority of these young people are undiagnosed. According to CABF ([www.bpkids.org](http://www.bpkids.org)), bipolar disorder is believed to occur in approximately one to two percent of the adolescent and adult population; bipolar spectrum disorder and related conditions (such as recurrent depression) occurs in five to seven percent of the same population. While the exact

prevalence among younger children is unknown, the number being diagnosed with bipolar disorder is increasing as pediatricians and other professionals who work with children begin to recognize signs of the illness.

Bipolar disorder may be particularly difficult to diagnosis in children and adolescents because its symptoms can be hard to distinguish from symptoms of other problems that may occur in these age groups. Childhood conditions such as attention deficit hyperactivity disorder (ADHD), conduct disorder, oppositional defiant disorder, as well as other types of mental illnesses that are more common among adults (major depression or schizophrenia) often present similar symptoms.

Despite the challenges associated with accurate diagnosis and the limited research on the safety and efficacy of medications in children, research shows that, in the last decade, there has been a dramatic increase in the number of office-based visits by children and adolescents that included a prescription for psychotropic medications.<sup>1</sup> This increase is likely due, in part, to the availability of new, putatively safer medications. Additionally, access to and duration of inpatient psychiatric treatment for children and adolescents is declining. Physicians are turning to psychotropic agents to treat a severely ill group of children and adolescents.

Most child mental health practitioners, advocates, and researchers agree that more research is needed to help ensure that young people suffering from bipolar and other psychiatric disorders are properly diagnosed and safely treated.

# Advances in the Treatment of Pediatric Bipolar Disorder



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Dr. Robert Findling is attracting national and international attention for his work on pediatric bipolar disorder. His research goals include understanding the risk factors or precursors to pediatric bipolar disorder, accurately diagnosing the disorder, and identifying effective and safe treatments. He recently received \$21 million in funding from the National Institutes of Health (NIH) to carry out research studies in these areas.

A critical challenge associated with pediatric mental health conditions is proper diagnosis. Bipolar disorder in children is difficult to diagnose for a number of reasons. Symptoms often resemble those associated with other disorders, and bipolar disorder may co-occur with other conditions such as attention deficit hyperactivity disorder (ADHD). Also, children may experience one or more of the symptoms of bipolar disorder, such as mania, but not meet the full clinical definition of the disease.

To expand the knowledge base, Dr. Findling and his colleagues have initiated the Longitudinal Assessment of Manic Symptoms (LAMS) project. This intensive study will carefully investigate elevated symptoms of mania in children and adolescents with the goal of developing more accurate assessment and diagnostic tools for bipolar disorder. The LAMS study will identify and recruit children between the ages of six and twelve years who are suffering from symptoms of mania. The children are currently being identified from the outpatient clinics at University Hospitals Case Medical Center, and will be assessed every six months over the course of five years. The goals of the study are to understand the characteristics of children who eventually develop pediatric bipolar disorder, and to document the factors associated with poor outcomes over time. The proposed research also aims to clarify current controversies regarding the differential diagnosis between bipolar disorder and childhood ADHD.

Effective treatment is another critical issue in child and adolescent mental illness. In many cases, despite a lack of research in populations of children, the same pharmaceuticals and treatment strategies employed with adults are being used with children. Children and teens struggle with severe mood disorders at concern-

ing rates. Developing and testing appropriate interventions is extremely important. Dr. Findling is directing a number of studies designed to produce a better understanding of the effectiveness and safety of various treatment options. The Collaborative Lithium Trials (COLT), a series of two multiphase studies, are examining lithium as a treatment for children and adolescents with mania. Lithium is a mood stabilizer. It is historically the most widely used and effective treatment for adults with bipolar disorder, but its efficacy and safety in youth have not been established. COLT will study lithium dosing strategies, efficacy, safety, use as a maintenance therapy, and long-term effects on children. The studies will also explore the long-term cognitive effects on children taking prescribed lithium, and compare its effectiveness to other treatments such as psychosocial/educational treatment ("talk therapy").

Dr. Findling and his colleagues recently published the results of studies examining the effectiveness of other mood stabilizing drugs in the treatment of pediatric bipolar disorder. He comments that this work has, "...demonstrate[d] that not only are long-term studies in children and adolescents with bipolar disorder possible, they are also needed in order to examine how best to treat this chronic condition." One such study compared the effectiveness of divalproex sodium and lithium in the maintenance treatment of pediatric bipolar disorder, and determined that these medications worked equally well as maintenance therapy.

Dr. Findling's research is also providing new information on effective ways to identify and treat children with symptoms of bipolar disorder who are at-risk for developing the full expression of the disease. Heredity is an important risk factor. Dr. Findling's research

helped to establish a link between the early onset of bipolar symptoms and having a parent with bipolar disorder. Among genetically at-risk youth, bipolar symptoms are often a precursor to the more serious expressions of the condition. Dr. Findling's research found that these children suffer from serious mood symptoms as well as psychosocial dysfunction. Yet, despite the obvious need for intervention, there had been limited research on the treatment of this vulnerable population. Dr. Findling is now completing a study that investigates whether divalproex sodium is superior to a placebo in the treatment of youth who suffer from

symptoms of bipolar disorder and who also have a parent who has been diagnosed with bipolar illness. Preliminary findings suggest that divalproex sodium was not superior to the placebo, yet both interventions appeared to be effective, indicating it may be useful to more fully explore the value of psychosocial interventions in this patient population.

In addition to Dr. Findling's pharmacological studies, he will be exploring cognitive behavioral therapy – "talk therapy" – as a treatment option and/or component in the effective treatment of pediatric bipolar disorder.

ROBERT FINDLING directs **The Discovery and Wellness Center for Children** in the Department of Psychiatry at Case. The Center's mission is to compassionately conduct clinically meaningful research that will better the lives of children and adolescents suffering from psychiatric illnesses. The research the Center performs is done in a safe and family-centered environment. The research team is committed to serving patients by providing greater medical knowledge to the community at large through fostering a better understanding on childhood psychiatric illnesses and by focusing efforts on improving assessment procedures, preventative interventions, and therapeutic innovations.

For more information on the Center or on Dr. Findling's research go to:  
[www.case.edu/med/psychiatry/dwcc/dwcc-home.htm](http://www.case.edu/med/psychiatry/dwcc/dwcc-home.htm)

## IMPLICATIONS FOR POLICY AND PRACTICE

The research being done by Robert Findling at Case Western Reserve University has significant implications for policy and practice.

Serious psychiatric disorders in children are frequently misunderstood and/or misdiagnosed by clinical social workers, mental health counselors, child psychiatrists, child psychologists, and other health care professionals. Research aimed at developing more accurate assessment and diagnostic instruments is a critical component in equipping mental health professionals with the tools they need to accurately identify these children.

In addition to assisting mental health professions, research-based information on the proper identification, diagnosis, and treatment of childhood mental illness is also critical to other adults in children's lives:

**Parents** Parents play a primary role identifying their children's mental health challenges and needs. They also have the often-overwhelming task of finding resources to address those challenges and meet those needs.

**Schools** Research shows that schools play a major role in identifying and serving children with mental and emotional disorders.<sup>2</sup> Because the vast majority of children attend school, there is a growing consensus that these institutions are an ideal place to assist them. For many children receiving mental health care, the educational sector is the sole source of that care. Under the Federal Special Education Law and Part B of the Individuals with Disabilities Education Act (IDEA), schools are mandated to provide services to children

**The Best Pharmaceuticals for Children Act** (United States Public Law 107-109) was signed into law in January of 2002. Its goal is to improve the knowledge, safety, efficacy, and optimal therapeutic use of off-patent drugs in children. Through this Act, The National Institute of Child Health and Human Development (NICHD) has awarded contracts for a program entitled the Pediatric Off-Patent Drug Study (PODS). Dr. Findling's research on lithium in the treatment of pediatric mania is funded by one of these awards.

with mental health disturbances. There are also an increasing number of non-IDEA school-based mental health services.

**Pediatricians** While many families find navigating the mental health system very difficult and few have a regular source of mental health care, most children see their pediatrician at least once a year. However, research indicates that, while families and children increasingly rely on the pediatrician to meet mental health needs, pediatricians often believe they do not have adequate training to respond to these needs.<sup>3</sup>

<sup>1</sup> Jensen, P. S., Bhatara, V. S., Vitiello, B., Hoagwood, K., Feil, M., & Burke, L. B. (1999). Psychoactive medication prescribing practices for U.S. children: Gaps between research and clinical practice. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38, 557-565.

<sup>2</sup> Burns, B., Costello, J., Angold, A., Tweed, D., Stangl, D., Farmer, E., & Erkanli, A. (1995). Children's mental health services use across mental health sectors. *Health Affairs*: 14 (3).

<sup>3</sup> Philadelphia Citizens for Children and Youth. (2006). The role of Pediatricians in children's mental health: A policy brief from the Philadelphia Citizens for Children and Youth. (Retrieved from [www.pccy.org](http://www.pccy.org)).

#### AN EXAMPLE OF A LOCAL EFFORT TO IMPROVE POLICY & PRACTICE RELATING TO MENTAL HEALTH FOR CHILDREN

**THE ACCESS TO BETTER CARE INITIATIVE (ABC)** is an effort to comprehensively reform the mental and behavioral healthcare system for Ohio's children. The Initiative was developed to respond to the growing realization that under-serving children and adolescents with alcohol, drug, and/or mental health service needs result in increased costs in other parts of the system, as well as long-term negative outcomes for the youth themselves. This effort has been successful in bringing together leaders from across the human services spectrum to develop a comprehensive plan focusing on prevention, early assessment, and effective treatment. It has been successful in securing \$17.2 million for behavioral health programs and pilots in the state fiscal year 2006 budget and \$18.2 million in 2007. (For more information go to: [www.ohiofcf.org/features.asp?learn=abc](http://www.ohiofcf.org/features.asp?learn=abc))



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