Evidence-based treatments for Bipolar disorder in Children and Youth

Christopher Bellonci, M.D.
Vice President of Policy and Practice
Chief Medical Office
Judge Baker Children’s Center
Overview

• What are the criteria for Juvenile Onset Bipolar disorder?
• How does it differ from Adult Bipolar disorder?
• What are the evidence-based treatments for Juvenile Bipolar disorder?
• What is the differential diagnosis?
DSM-5

• DSM-5 provides no developmental criteria for Bipolar disorder.
• Children have to meet the same criteria as adults.
• This has led to the so-called “narrow” definition (i.e., DSM-5 definition).
• The “broad” definition remains very much in debate.
Brief History of Bipolar Disorder in Children

- Since the mid-1990s, there has been sizable debate that mania in children and adolescents presents differently compared to adults.
- Pediatric onset mania was theorized to present as severe non-episodic irritability with extended periods of very rapid mood cycling within the day versus discrete mood cycles.
- With this broader concept of pediatric bipolar disorder in the US, the rate of bipolar disorder diagnosis increased over 40-fold in less than a decade.

(Baweja et al., 2016)
How Did We Get Here?

• Before the 1980s, it was rare to use psychiatric medications in children other than stimulants for ADHD.

• Prepubertal children were not thought to be able to develop mood disorders (echoes of Freud and the absence of a superego necessary for depression).

• Used a developmentally-based, biopsychosocial formulation to explain behavior in children.
Some believe that children’s behavior can be primarily understood as biologically and genetically based.

Most psychiatric medications on the market are being used in children (often despite lack of safety and efficacy studies for many medications).


(Olfson, King, & Schoenbaum, 2015)
Adult Studies

• Tell us that it takes on average 10 years for the diagnosis to be made and treatment to be initiated.

• Creates a sense of urgency for timely detection and treatment given the significant morbidity and mortality associated with Bipolar disorder in adults.
DSM-5 Bipolar Disorder

• Manic episode:
  – Distinct period of abnormally and persistently elevated, expansive or irritable mood and persistently increased goal-directed activity or energy, lasting at least 1 week, present most of the day and every day (or any duration requiring hospitalization).
  – Must cause marked impairment in social or occupational functioning or to necessitate hospitalization.
DSM-5 Bipolar Disorder (cont.)

- 3 or more (4 if the mood is only irritable):
  - Inflated self-esteem or grandiosity
  - Decreased need for sleep
  - More talkative or pressured speech
  - Flight of ideas or racing thoughts
  - Distractibility
  - Increase in goal-directed activity or psychomotor agitation
  - Excessive involvement in pleasurable activities with a high potential for painful consequences

(APA, 2013)
Bipolar Disorder Type II

• Must have experienced both a hypomanic episode AND have experienced a major depressive episode, but never a manic episode (or it would be Bipolar Type I).
• Hypomania: a hypomanic episode requires an elevated, expansive or irritable mood to last at least four consecutive days and feature the same number of symptoms as in a manic episode, but the consequence of the episode is not severe enough to cause marked impairment in functioning or to necessitate hospitalization.
• The mood disturbance must be recognizable to others and be an unequivocal change from baseline functioning.

(APA, 2013)
How Do You Adapt These to a 5 Year Old? 10 Year Old?

• Must consider whether the presentation is a variation from baseline.

• Is there a specific context in which the symptoms are becoming manifest?

• Given the normal developmental vulnerabilities of children (impulsivity, brief but intense changes in mood, short attention spans), how do you differentiate normality from pathology?
How Do These Symptoms Translate to Children?

• Geller defined Grandiosity as:
  – “A child saying it is not wrong to steal after getting caught”
  – “A child believing they can become a professional athlete even though they are not good at sports”

• Elation in children is defined as:
  – “Excessive silliness or giggling” (Geller, 1997)
Variable Presentations

• If a child only manifests the symptoms of mania in one setting, home or school, can this still be considered mania?

• It is critically important in completing an assessment to gather information from multiple sources including: primary caretakers, teacher or other school staff, pediatrician, others.
Juvenile Bipolar Disorder

• Evolved to seeing the following symptoms as evidence of the condition:
  – Mood lability – “he gets upset/angry for no reason and with no apparent trigger”
  – Irritability
  – Reckless behavior
  – Aggression
  – Very rapid, brief, recurrent episodes lasting hours to a few days (Ultradian Cycling)
Meta-analytic Studies Identified 11 Symptoms Consistent With Pediatric Bipolar Disorder

- Increased energy – 89%
- Distractibility – 84%
- Pressured speech – 82%
- Irritability – 81%
- Grandiosity – 78%
- Racing thoughts – 74%
- Decreased sleep – 72%
- Euphoria/elation – 70%
- Poor judgment – 69%
- Flight of ideas – 56%
- Hypersexuality – 38%
- Psychosis* – 42%

(Sala et al., 2009)
Bipolar vs. ADHD

• No significant differences between the two conditions in rates of:
  – Irritability (98% BP vs. 72% ADHD)
  – Accelerated speech (97% vs. 82%)
  – Distractibility (94% vs. 96%)
  – Unusual energy (100% vs. 95%)

(Zimmerman et al., 2002)
Suspect the Presence of Bipolar Disorder in a Child With ADHD If:

- “ADHD” symptoms appeared later in life (>10)
- Symptoms appeared abruptly in an otherwise healthy child
- Symptoms were responding to stimulants and now are not
- Symptoms come and go and tend to occur with mood changes
- A child with ADHD begins to have periods of exaggerated elation, grandiosity, depression, no need for sleep, inappropriate sexual behaviors
- Recurrent severe mood swings, temper outbursts or rages
- Presence of hallucinations and/or delusions
- Strong family history of bipolar disorder

(Birmaher, 2013)
Irritability Link to Bipolar

• Defined as “…an emotional state characterized by having a low threshold for experiencing anger in response to negative emotional events (Leibenluft).”
• Lower threshold to anger
• Faster increase in anger
• Higher peak level of anger
• Longer duration of anger
Irritability Link to Bipolar (cont.)

• High sensitivity for Bipolar disorder – present in 55-94% of youth with Bipolar disorder.

• Low specificity—also part of the DSM IV criteria for:
  – Disruptive behavior disorders
  – Depression
  – Generalized Anxiety Disorder
  – PTSD

• Also seen in ADHD and PDD
Differential Diagnoses

- ADHD
- Oppositional-defiant disorder
- Conduct disorder
- Learning disabilities – Language and NVLD
- Trauma
- Substance abuse
- Autism-spectrum disorders
- Disorders of attachment
- Psychotic disorders
Depression in Juvenile Bipolar Disorder

- Over 50% of bipolar (BP) youth had a prior history of a major depressive episode.
- Often thought to precede the onset of manic symptoms raising concerns about treatment with antidepressants, particularly serotonergic agents, increasing the rate of BP disorder in the population.
Epidemiology

- Up to 50-66% of adults with BP report onset of symptoms prior to age 20. Lifetime prevalence in adults averages 3.9% of the US population and 2.5% in youth. Some studies report rates of BP in youth from 1-2% going as high as 6% for “soft” subsyndromal symptoms.

(Lui et al., 2011; NIMH, n.d.)
Are These Rates Being Seen in Other Countries?

- U.S. Children have hospital discharge diagnoses of BP disorder 72.1 times more often than children and youth in the U.K. (100.9/100,000 vs. 1.4/100,000 in U.K.).

- After controlling for cross-national differences in length of stay, discharge rates for BP disorder remained 12.5 times higher in U.S.

(James et. al., 2014)
Comorbidity

- ADHD – 60-90%
- Disruptive behavior disorders – 47-88% (Joshi, 2009)
- Anxiety disorders (adults) – 75%
- Substance use disorders (adults) 50%
- Other comorbidities can include: OCD, PTSD and PDD

(Lui, et al., 2011; APA, 2013)
Functional Consequences

- School: poor academic performance, disruptive school behavior, neurocognitive deficits as compared to healthy peers.
- Social: limited peer support, risk for peer victimization, poor social skills as compared to healthy peers.
- Family: strained relationships, low levels of cohesion, increased conflict.

(West et al., 2014)
Significant Morbidity and Mortality

- Risk of substance use is high.
- High rates of hospitalization and suicide attempts.
- Lifetime suicide risk is 15x higher in those with BP disorder as compared to the general population (including adults). BP disorder may account for 25% of all completed suicides (also an adult statistic).
- World Health Organization data indicate BP disorder is the 4th leading cause of disability in people ages 10-24 years old worldwide.

(Joshi, 2009; West et al., 2014; APA, 2013)
Assessment Instruments

• Kiddie Schedule for Affective Disorders and Schizophrenia for School Age Children—Present and Lifetime Version (K-SADS-PL) or Washington U. version:
  – Structured interview
  – Lengthy, time consuming
  – Mainly used in research

• Symptom checklists based on DSM
Rating Instruments

• Young mania rating scale (YMRS)
  – Derived from the KSADS
  – Validity studies are still needed

• Parent report instruments:
  – General Behavior Inventory (GBI), parent version of YMRS
  – Child Mania Rating Scale for parents (CMRS-P)

• Primarily screening tools since specificity has yet to be determined
Child Behavior Checklist
“Bipolar Profile”

- A pattern of elevated scores in the domains of aggression, attention, delinquency and anxious/depressed was postulated to be a marker for JBP.

- Sensitivity was found to be significantly lower than that of the mania-specific instruments.

- Largely discounted as a reliable diagnostic tool for mania although it is associated with greater severity of psychopathology across multiple domains.

- Now being viewed as a “dysregulation” profile.
Course and Outcome

• 70-100% of children and adolescents with BP will eventually recover from their index episode (defined as no significant symptoms for 2 months).

• Up to 80% will experience one or more recurrences in a period of 2-5 years.

(Birmaher 2007)
Does the Juvenile Version Become the Adult Version?

• Unclear and focus of much debate in the field

• In the late 1970s researchers found that adults with Bipolar disorder reported symptoms starting prior to age 19 in 20% of cases.

• Typically the onset was first a depressive episode and hyperactivity with mania occurring later in the course of the disorder
6 Year FU Study From Australia

- Males meeting criteria for ADHD and Mania (n=15); ADHD only (n=65); normal controls (n=17). Ages 9-13. Reevaluated 6 years later (now 15-19).
- How many youth originally diagnosed with Mania continued to meet criteria 6 years later? ONE!!
- 3 (5%) of the ADHD youth developed mania. No controls developed mania.
- Global functioning was significantly lower at follow-up in the mania + ADHD cohort.

(Hazell et al., 2003)
Twin and Adoption Studies

• First-degree relatives of adults with BP are at 8-10 fold increased risk of developing BP. Offspring of BP parents have between 5.4-15% lifetime prevalence of BP.
  – Also at increased risk to develop depression, anxiety, ADHD and other behavioral disorders.

(Tsuang & Faraone, 1990; Birmaher et al, 2009; Lapalme et al, 1997)
Genetic Studies

• Estimated heritability of 80%
• Meta-analyses of linkage studies continue with several plausible regions on chromosomes:
  – 13q
  – 22q
  – 9p22.3-21.1
  – 10q11.21-22.1
  – 14q24.1-32.12

(Craddock & Forty, 2006)
Neuroimaging Studies

• White matter hyperintensities found in both cortical and subcortical regions.
• Smaller volumes of amygdala, hippocampus and cingulate gyrus.
• Reduced gray matter volume in the dorsolateral prefrontal cortex.

(Frazier et al., 2005)
Neurocognitive Function

• Several cognitive deficits have been found including:
  – Difficulties in attentional set-shifting
  – Visuospatial memory
  – Verbal memory
  – Executive function

• These studies are preliminary, include small samples and may be impacted by medication treatment and comorbid conditions.

(Pavuluri, 2009)
Longitudinal Assessment of Manic Symptoms (LAMS) Study

- Aim was to examine differences in psychiatric symptoms, diagnoses, demographics, functioning and medication use between youth with elevated symptoms of mania (ESM+) and those without (ESM-).
- Large, NIMH-funded multisite study (10 sites); N=707 children, (621 ESM+; 86 ESM-); 6-12 years old.
- ESM+ defined as rapid mood swings and high energy (score of >12 on PGBI).
- Followed every 6 months for up to 5 years.
- Although ESM+ was associated with higher rates of BP, 75% of ESM+ children did not meet criteria for BP.
- Similar to the Australian study, ESM+ children showed poorer overall functioning (CGAS).
LAMS Study Conclusions

• ESM are common and are associated with elevated *rates* of mania indicating a potential use for screening.

• ESM are associated with non-Bipolar diagnoses and/or may be markers of severe pathology rather than a specific marker for Bipolar disorder.

• ESM+ more likely to have:
  • ADHD 76%
  • Disruptive behavior disorders 51%
  • Mood disorders 40.5% (BP 11%; BP-NOS 12%)
  • Anxiety disorders 31.3%

• ESM+ may be marker of disruptive behavior with mood symptoms.
Course and Outcome of Bipolar Youth (COBY) Study

- Multi-site, NIMH-funded, N=263, ages 7-17.
- **Objective**: To assess the clinical presentation and family history of children and adolescents with BP-I, Bipolar II disorder (BP-II), and Bipolar disorder not otherwise specified (BP-NOS).
- **Design**: Subjects and their primary caretaker were assessed by semi-structured interview (KSADS) and family psychiatric history was obtained from interview of the primary caretaker.
- **Participants**: A total of 438 children and adolescents (mean ± SD age, 12.7 ± 3.2 years) with BP-I (n = 255, 58%), BP-II (n = 30, 6.8%), or BP-NOS (n = 153, 34.9%).
Course and Outcome of Bipolar Youth (COBY) Study (cont.)

Minimum inclusion threshold for the BP-NOS group were subjects who did not meet the *DSM-IV* criteria for BP-I or BP-II but had a distinct period of abnormally elevated, expansive, or irritable mood plus the following:

- **2 DSM-IV manic symptoms** (3 if the mood is irritability only) that were clearly associated with the onset of abnormal mood,
- **clear change in functioning**;
- mood and symptom **duration of a minimum of 4 hours within a 24-hour period** for a day to be considered meeting the diagnostic threshold; and
- **minimum of 4 days (not necessarily consecutive)** meeting the mood, symptom, duration, and functional change criteria over the subject's lifetime, which could be two 2-day episodes, four 1-day episodes, or another variation.
Youth with BP-NOS were not diagnosed as having BP-I primarily because they did not meet the DSM-IV duration criteria for a manic or mixed episode.

There were no significant differences among the BP-I and BP-NOS groups in age of onset, duration of illness, lifetime rates of comorbid diagnoses, suicidal ideation and major depression, family history and the types of manic symptoms that were present during the most serious lifetime episode.

Compared with youth with BP-NOS, subjects with BP-I had more severe manic symptoms, greater overall functional impairment, and higher rates of hospitalization, psychosis and suicide attempts.

Elevated mood was present in 81.9% of subjects with BP-NOS and 91.8% of subjects with BP-I.
Children and adolescents with BP-II and BP-NOS have a phenotype that is on a continuum with that of youth with BP-I. Elevated mood is a common feature of youth with BP-spectrum illness.
Evidence-Based Treatments

• There is a “scarcity of data” regarding evidenced-based treatments for pharmacological or psychotherapeutic approaches to treating bipolar disorder in children. Approaches currently reflect treatment in adult populations.

• A review and meta-analysis of pharmacological treatments for pediatric bipolar disorder examined PubMed searchable content from 1989-2010 and found only 46 clinical trials of antimanic agents for pediatric bipolar disorder, 29 of which were open-label trials and only 17 were randomized control trials.

(NIMH, n.d; Lui, et al., 2011)
Choosing Your Treatment Approach

• First-line options – When managing clear Bipolar I disorder, AACAP states that pharmacotherapy is the primary treatment option.

• While pharmacotherapy is the primary treatment intervention, medication alone may not address the functional and developmental consequences of Bipolar disorder and therefore, adjunctive psychotherapy is “almost always indicated” for pediatric Bipolar disorder.

(McClellan et al., 2007)
Psychotherapies

• NIMH suggests the following psychotherapies can be used in treatment of Bipolar disorder:
  – Cognitive behavioral therapy (CBT)
  – Family-focused therapy
  – Interpersonal and social rhythm therapy
  – Psycho-education

Only two psychotherapies showed efficacy in randomized controlled trials: multi-family psycho-education group psychotherapy and family focused therapy.

(NIMH, 2016; West et al., 2014)
Child and Family-Focused CBT (CFF-CBT)

- Early data supporting efficacy; program involves:
  - 12 manualized weekly 60-90 minute sessions with parent, child and/or family; and
  - Combines traditional CBT features such as psychoeducation with complementary mindfulness-based and interpersonal/family therapy techniques.

- Outcomes included efficacy related to lower parent-reported mania symptoms, lower parent-reported depression symptoms, improved global functioning (at follow-up, active treatment youth reported functioning well at home and school, having meaningful social relationships and behavioral problems were sporadic or isolated).

(West et al., 2014)
Medication Management

• Traditional mood stabilizers (e.g., lithium, valproate) and/or atypical antipsychotic medications are the primary treatment.

• Other psychotropic agents and psychotherapies generally used as adjunctive therapy or to address comorbid conditions and problems.

• Treatment should begin with an agent that is approved by the FDA for bipolar disorder in adults, recognizing that the evidence of the efficacy for these agents in children and adolescents is sparse at best.

(AACAP, 2007)
Psychotropic Medications

• Lithium is approved down to age 12 years for acute mania and maintenance therapy (FDA).
• Aripiprazole, risperidone, quetiapine and asenapine are approved for acute mania in children 10 years old or older. Olanzapine is approved for youth with manic or mixed states > 13 yo (FDA)
• Chlorpromazine is also approved for acute mania in children (ages 1-12), but it is generally not used as a first-line agent.
• Both lamotrigine and olanzapine are approved for maintenance therapy in adults.
• The combination of olanzapine and fluoxetine is approved for Bipolar depression in adults.
Traditional Mood Stabilizers

• There is limited evidence for efficacy for the traditional mood stabilizers in the treatment of pediatric Bipolar disorder, and this class of compounds has a narrow therapeutic index.
  – Response rates for manic symptoms average around 40%

(Lui et al., 2011)
Lithium

- Antimanic response rate: around 40%; as of publication of the meta-analysis and review in 2011, there were no double-blind studies for response rates for lithium as monotherapy.
- Common adverse effects: nausea, vomiting, increased appetite, weight gain, headaches and stomachaches.
- Monitoring:
  - Baseline: laboratory assessment should include complete blood cell counts; thyroid function tests; urinalysis; blood urea nitrogen, creatinine, and serum calcium levels; and a pregnancy test in female adolescents.
  - Ongoing: once a stable lithium dose is obtained, lithium levels, renal and thyroid function and urinalyses should be monitored regularly (every 3-6 months).

(Lui et al., 2011; McClellan et al, 2007)
Anticonvulsant Mood Stabilizers

- **Carbamazepine**: Only two trials – both are open-label; response rate of around 40%
  
  Common adverse effects: nausea and sedation

- **Valproic Acid**: Eight open-label trials, three double blind trials = average response rate of 43%
  
  - Study of divalproex sodium and lithium as maintenance medications post-stabilization showed no benefit to one over the other
  
  - Monitoring:
    
    - Baseline: liver function tests, complete blood cell counts and pregnancy tests are recommended
    
    - Ongoing: Serum drug levels, plus hepatic and hematological indices, should be monitored periodically (every 3-6 months)

(Lui et al., 2011; McClellan et al, 2007)
Anticonvulsant Mood Stabilizers (cont.)

• Lamotrigine:
  – Only one study for lamotrigine as an antimanic agent – it is an open-label study and the response rate was 54%
  – Common adverse effects: GI symptoms, headaches and skin rashes

• Oxcarbazepine:
  – One double-blind study of oxcarbazepine’s use in pediatric Bipolar; didn’t separate oxcarbazepine from placebo.
  – Common adverse effects: dizziness, nausea, somnolence, diplopia, fatigue and rash.

(Lui et al., 2011)
Anticonvulsant Mood Stabilizers (cont.)

• Topiramate
  – Two open-label studies, one double-blinded study for use in pediatric Bipolar as of 2011 review:
    • The two open-label studies looked at topiramate’s efficacy in decreasing SGA-related weight gain – both studies showed efficacy
    • One study also showed the addition of topiramate lowered YMRS scores, the other didn’t
    • The only study of topiramate for treatment of Bipolar alone didn’t separate the active treatment group from placebo group, though the study was reportedly flawed.
  – Common adverse effects: decreased appetite, nausea and weight loss.

(Lui et al., 2011)
Antipsychotic Medications

- First generation antipsychotics (FGAs, sometimes called “typical antipsychotics”) and second generation antipsychotics (SGAs, “atypical antipsychotics”).

- FGAs were developed in the 1950s and include medications such as haloperidol and chlorpromazine
  - FGAs can have significant and lasting side effects:
    - Common side effects: dry mouth, sedation and extrapyramidal symptoms (EPS), which are movement disorders characterized by repetitive, involuntary muscle movements, restlessness, or an inability to initiate movement.
    - Rare, but severe side effect: neuroleptic malignant syndrome.

- FGAs are largely out of favor in part because the SGAs arrived in the 1980s and offered an option that reduced risk for EPS and other significant side effects of FGAs.

(AHRQ, 2015)
Second Generation Antipsychotics

• SGAs have a stronger therapeutic profile and larger margin of safety as compared to mood stabilizers for treatment of pediatric Bipolar disorder.

• However, a summary of the 2015 AHRQ systematic review of antipsychotics reports SGAs have limitations. Per AHRQ, SGAs:
  – Probably decrease mania and depression (though slightly);
  – Probably improve symptom severity and global functioning, to a small extent;
  – Probably increase response and remission rates compared to placebo for mixed/manic states;
    – Of note, 15 of the 18 trials had follow-up periods ranging from 3 to 12 weeks.

• Several within-study subgroup analyses showed that concomitant use of psychostimulants had no significant effect on manic symptoms.

(Lui et al, 2011; AHRQ, 2015)
Second Generation Antipsychotics (cont.)

• Common side effects: weight gain, elevated lipid and prolactin levels, risk for DM-II and development of metabolic syndrome.

• Youth are at higher risk for acute and long-term side effects from antipsychotics than adults, especially with regard to weight gain and glucose and lipid abnormalities.

• Monitoring: baseline body mass index, waist circumference, blood pressure, fasting glucose and a fasting lipid panel.

• Extrapyramidal side effects, including tardive dyskinesia, may occur with atypical agents and need to be monitored.

(AHRQ, 2015; Seida, 2012; Cornell & Bladder, 2015; McClellan et al, 2007)
Second Generation Antipsychotics (cont.)

• Monotherapy is uncommon, due in part to comorbidities. In one retrospective study, the mean number of medications per patient was three and only 23% of patients were treated with monotherapy.

• There is little data directly comparing different SGAs or examining efficacy of the same SGAs at different doses.

• In studies, placebo medication adherence is far better than SGA medication adherence.

• There is little literature looking at how effective the SGAs are at treating depression associated with Bipolar disorder – the 2015 AHRQ review reported SGAs probably only decrease depressive symptoms slightly. A separate head-to-head review found Aripiprazole, olanzapine and quetiapine didn’t significantly separate from placebo for depressive symptoms.

(Lui et al., 2011; Seida, 2012; AHRQ, 2015)
Medication Combination Therapy

• Some evidence that combination therapies work when monotherapy has failed.
  – Findling et al. reintroduced divalproex plus lithium in patients who didn’t respond to either medication individually = 89.5% response rate.
  – An open-label study found that the combination of risperidone plus divalproex and risperidone plus lithium led to response rates of 80% and 82.4% respectively (remission rates were 60% and 64.7%). This was a small study and seven of the 20 participants in the lithium group dropped out – none in the divalproex group did.

(Pavuluri, 2004)
Youth vs. Adult Med Response

• SGAs had a larger effect size than mood stabilizers in youth with Bipolar disorder.

• Other findings from this research include:
  – SGAs caused more weight gain than mood stabilizers in youth, but not in adults;
  – In youth, SGA-related somnolence was greater than with mood stabilizers and was more likely than in adults; and
  – Youth experienced less frequent SGA-related akathisia with SGA than adults.

(Lui et al., 2011)
Treatment of Early Age Mania Study (TEAM)

- Multi-site, 8 week, RCT comparing Risperdal, Lithium and Depakote
- 279 pts age 6-15 without prior med trials with DSM-IV Dx of Bipolar disorder, manic or mixed state
- Risperdal > Lithium and Depakote *BUT*...
- Magnitude of effect influenced by site and presence of ADHD

(Vitiello et al., 2012)
Naturopathic Treatments

- Very little data is available.
- One open-label study of fish oil showed modest benefit in treating pediatric Bipolar disorder.
- A study of flax seed showed no efficacy.

(NIMH, 2016; Lui et al., 2011)
Treatment Implications

• Misdiagnosis may lead to treatments based on adult Bipolar literature with uncertain long-term impacts for youth (e.g., Atypical antipsychotics).
• Misdiagnosis also impacts etiological research, genetic counseling and family educational interventions.
• May preclude other, more effective behavioral interventions.
Treatment Implications (cont.)

• Primary treatment of Bipolar disorder is medication (mood stabilizers, antipsychotics).

• Some support in the adult literature for the efficacy of:
  – Psychoeducational therapy
  – Relapse prevention: monitor sleep, avoid illicit drugs, manage stress, stay on prescribed meds
Treatment Implications (cont.)

• Individual psychotherapy: may support psychological development, skill building and close monitoring of symptoms

• Social and family functioning: may benefit from interventions directed at improving communication and problem-solving skills

• Academic accommodations

• Community and peer supports as well as advocacy
Other Considerations

• Ensuring these evidence-based interventions are available in the service array and accessible

• **Workforce development** (training, coaching, supervision, certificate programs)

• **Fiscal issues** (e.g., incentives for implementing EBPs, $ for training and ongoing professional development) need attention in the systems to ensure providers to whom youth may be referred are capable of implementing the most effective programs for depressive disorders... especially in light of the 10-15% prevalence rate in adolescents
Other Considerations (cont.)

• Ensuring that care coordinators/wrap facilitators are aware of the need to access relevant EBPs for depression (and other diagnostic categories) when planning with a youth/family/team, and know who provide such treatments

• Building capacity for peer to peer support in a system and service array so that there are other relevant supports readily available, especially for adolescents who may be struggling with depression and other challenges
Family Resources (Endorsed by AACAP)

• The Balanced Mind Foundation at [www.thebalancedmind.org](http://www.thebalancedmind.org)
• National Alliance on Mental Illness at [www.nami.org](http://www.nami.org)
• Mental Health America at [www.mentalhealthamerica.net](http://www.mentalhealthamerica.net)
• Substance Abuse and Mental Health Services Administration (SAMHSA): [https://www.samhsa.gov/children](https://www.samhsa.gov/children)
Bipolar Disorder Resources

• Web-based materials:
References


