Diagnosing Bipolar Disorder in Children NCH-BH Primary Care Webinar, 1/11/2023

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Conflicts of Interest

- Royalties:
 - Guilford Press
 - American Psychiatric Publishing
 - JK Seminars
- Research:
 - Janssen
- •Editorial Stipend & Travel:
 - Society of Clinical Child and Adolescent Psychology



Objectives

(1)Name the types of diagnoses included in bipolar spectrum disorder.

(2)State the prevalence of bipolar I and bipolar spectrum disorders in US youth.

(3) Name a diagnostic mnemonic and list its associated symptoms.





Bipolar Spectrum Diagnoses

- Bipolar Disorder I (BP1): M (+ D)
- Bipolar Disorder II (BP2): m + D
- Cyclothymia (CYC): m + d
- Other Specified Bipolar and Related Disorder (OSBARD or BP-NOS):
 Define why
 - •Duration insufficient?
 - •One symptom short?
 - •Episodes not clearly defined?
 - •Informants sketchy, need to observe before finalizing diagnosis?





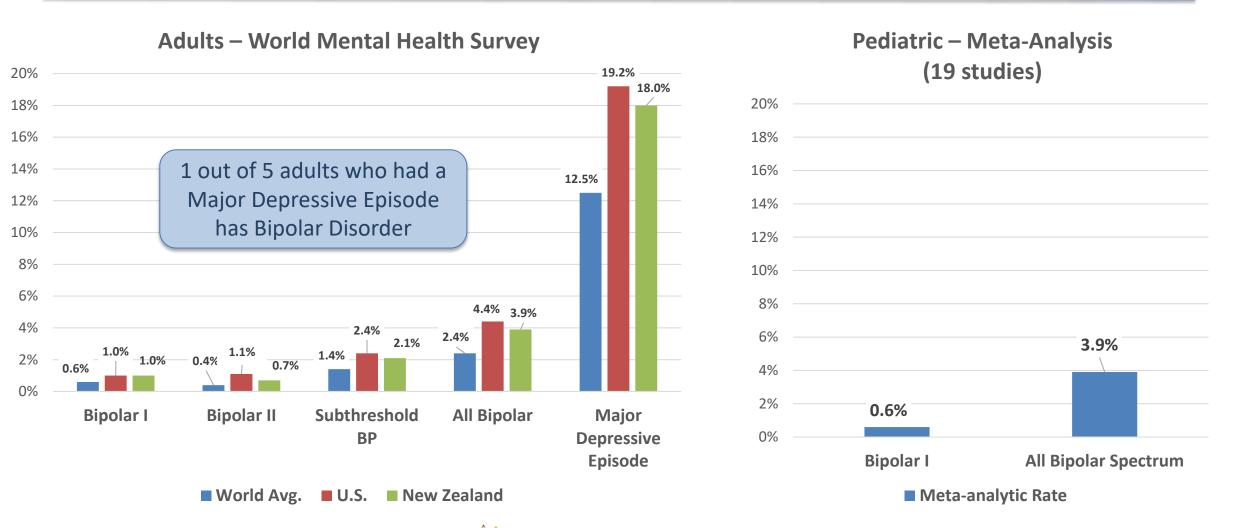
Epidemiology

Van Meter et al., 2019, J Clin Psychiatr, 80(3): 18r12180

- 19 epidemiologic studies, N=56,103 (n=1,383 with bipolar disorder)
 - •7 from US, 12 from South America, Central America, or Europe
- 3.9%, Bipolar Spectrum Disorders
- 0.6% Bipolar Disorder- Type I
- Rates are not higher in the US than other countries
- Rates are not increasing over time (pre/post 2000)
- Need non-Western country data, consistent measurement, more data on young children.



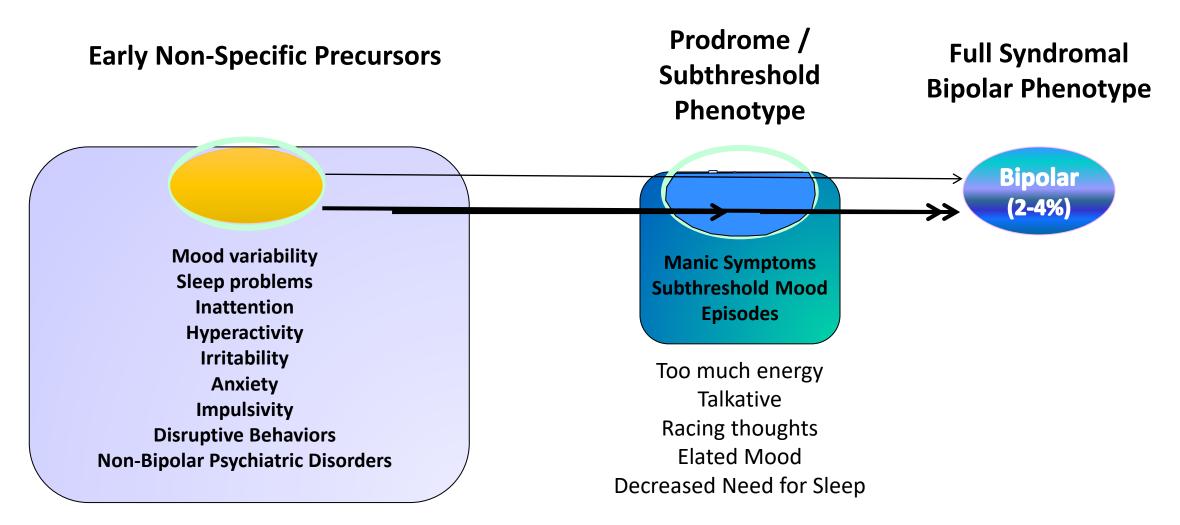
Epidemiology of Bipolar Disorder



Who is at Risk for Bipolar Disorder? Birmaher et al, 96

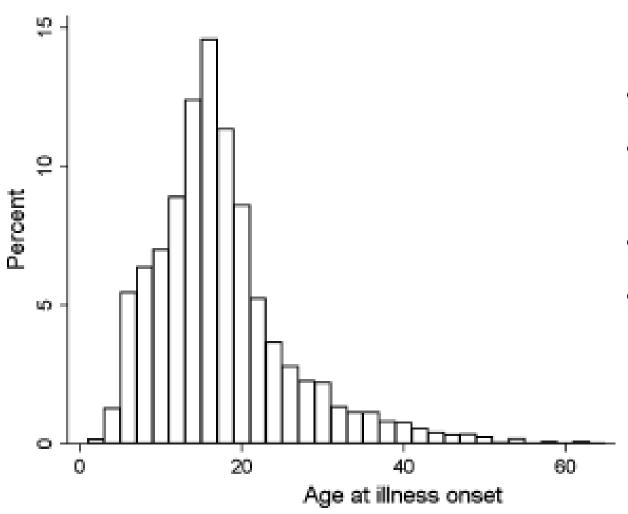
- $\approx \frac{1}{4}$ of depressed children develop bipolar disorder within 2-5 yrs
- Risk factors include:
 - symptoms of psychomotor retardation or psychosis
 - + family history-- bipolar disorder
 - ++ family history--mood disorder
 - Medication induced hypomania

Developmental Progression of Bipolar Illness



Faedda GL et al., *Bipolar Disorders* (2019)
Van Meter AR et al., *J Am Acad Child Adol Psychiatry* (2016)

Age of Bipolar illness onset



- N = 3,658
- 1st onset of cluster of manic or depressive symptoms
- 29% child onset
- 38% adolescent

Why Do People Get Mood Disorders?

Part of the story is genetics...

- 1 in 3 adopted persons with bipolar disorder have biological parents with mood disorders (compared to 1 in 50 adopted persons without bipolar disorder) Mendlewicz and Rainer, 1977
- If 1 parent has a mood disorder, 27% offspring + If 2 parents have a mood disorder, 74% offspring + Gershon et al., 1982
- If one twin has a mood disorder— Sullivan et al., 2000; Kieseppa et al., 2004

The Other Twin	Identical	Non-identical
Depression	43%	28%
Bipolar Disorder	75%	11%





DIG FAST (Mania)

- Distractibility (must be a change from baseline-not ADHD)
- Indiscretion or excessive Involvement in pleasurable activities
- <u>G</u>randiosity
- Flight of ideas
- Activity increase (see distractibility)
- Sleep deficit (but not tired)
- <u>T</u>alkativeness





WHIPLASHED (Bipolar Depression; ≥5 symptoms)

Ronald W. Pies, MD, Psychiatric Times, Vol 24 No 3

- Worse or "wired" when taking antidepressants. Complaints of feeling "antsy," unable to sleep, or more agitated on conventional antidepressants. Numerous failed antidepressant trials; apparent "tolerance" to antidepressants not overcome with increased dosage (pseudotolerance); antidepressant-induced "switching" into mania or cycle acceleration may be reported.
- **Hypomania, hyperthymic** temperament (intense optimism, increased energy, reduced need for sleep, extroversion, overconfidence) or mood swings by history. Periods of elevated mood or energy often do not fit formal DSM-IV criteria for hypomania; eg, may last only a day or two. Mood lability in younger patients may be even more dramatic and poorly demarcated.
- Irritable, hostile, or showing mixed features during depression. May show one or more hypomanic features (eg, racing thoughts) even while depressed.
- **Psychomotor retardation** appears more common in bipolar I depression than unipolar major depression; **psychomotor agitation** more common in bipolar II than in unipolar major depression.
- **Loaded family history** for mood swings, bipolar disorder, or affective illness in general; also, comorbid mood disorder and alcoholism.
- Abrupt onset and/or termination of depressive bouts, or relatively brief depressive episodes (less than 2 to 3 months). May have a brief burst of increased energy or subthreshold hypomanic symptoms immediately before the onset of depression.
- **Seasonal** pattern of depression (depressed in fall/winter, hypomanic in spring).
- Hyperphagia and hypersomnia- more common in bipolar depression than in unipolar depression. Paradoxically, hypersomnia may coexist with psychomotor agitation in bipolar II patients ("sleepy speeders").
- **Early age** at depression onset (younger than 25 years), especially with psychotic features.
- **Delusions, hallucinations, or other psychotic features** appear to be more common in bipolar than in unipolar depression.





Symptoms of Mania/Hypomania

Distinct period of abnormally and persistently elevated, expansive, or irritable mood and persistently increased goal-directed activity or energy, plus:

- Inflated self-esteem or grandiosity
- Decreased need for sleep (feels rested with only 3 hours of sleep)
- More talkative than usual or pressure to keep talking
- Flight of ideas or racing thoughts
- Distractibility (attention too easily drawn to irrelevant stimuli)
- Increase in goal-directed activity (either socially, at work or school, or sexually) or psychomotor agitation
- Excessive involvement in pleasurable activities that have a high potential for painful consequences (e.g., engaging in unrestrained buying sprees, sexual indiscretions, or foolish business investments

Manic / Hypomanic episodes in DSM-5

- At least 3 symptoms (at least 4 if irritable mood only)
- Mood and symptoms present most of the day, nearly every day
 - 7 days for manic episode (any duration if hospitalized)
 - 4 days for hypomanic episode
- Episodes that emerge during antidepressant treatment and persist at full syndromal level after stopping treatment "count"
- Specifiers for manic, hypomanic and major depressive episodes
 - With anxious distress
 - With mixed features

Bipolar and related disorders in DSM-5

- Bipolar I disorder: manic episode(s)
- Bipolar II disorder: hypomanic & major depressive episode(s)
- Cyclothymic disorder: numerous periods of subthreshold hypomania and depression over 2 years (1 year for kids)
- Substance/Medication-Induced or Due to Medical Condition
- Other Specified Bipolar and Related Disorder
 - Short (2-3 day) hypomanias + MDE's
 - Hypomanias with insufficient symptoms + MDE's
 - Hypomanic episodes with no prior MDE
 - Short-duration cyclothymia (? Minimum duration)
- Unspecified Bipolar and Related Disorder

Subthreshold BP: Bipolar Not Otherwise Specified (BP-NOS)

- Duration too short (episodes < 4 days) and/or 1 symptom short
- Distinct period of abnormally Elated Mood plus 2 symptoms or Irritable Mood plus 3 symptoms
- Mood must be clear change from usual and symptoms must be associated/intensify with mood change
- Change in functioning
- Not associated with medication
- At least 4 hours meeting above criteria in a 24-hour period to count as "one day" (persistence / to a significant degree)
- Lifetime of ≥ 4 days total of meeting criteria (e.g. 4 one-day episodes; 2 two-day episodes, etc.)

Health Conditions that Mimic BPD

- Temporal lobe epilepsy
- Hyperthyroidism
- Closed or open head injury
- Multiple sclerosis
- Systemic lupus erythematosus (SLE)
- Alcohol related neurodevelopmental disorder
- Wilson's disease

Medications that May Increase Cycling Abouesh et al 2002, J Clin Psychopharm

- ANY biological intervention for depression
 - Tricyclic antidepressants
 - Serotonin specific reuptake inhibitors
 - Serotonin and norepinephrine reuptake inhibitors
 - Light box
- Aminophylline
- Corticosteroids
- Sympathomimetic amines (eg, pseudoephedrine)
- Antibiotics (eg, clarithromycin, erythromycin, amoxicillin)
- Illicit drugs

BPD vs ADHD: Symptoms that Overlap

Geller et al. (2002)

Symptoms	EOBD	ADHD
Irritability	98%	72%
↑ Speech	97%	81%
Distractability	93%	96%
↑ Energy	100%	95%

BPD vs ADHD: Symptoms that Differ Geller et al. (2002)

Symptom	EOBD	ADHD
Elated Mood	89%	13%
Grandiosity	86%	5%
↓ Sleep	40%	6%
Flight of ideas	71%	10%
Hypersexuality	43%	6%
Suicidality	25%	0%
Psychosis	60%	0%

Is it BPD or A/PTSD?

- Symptoms of BPD and A/PTSD overlap
- Symptoms can also co-occur
 - Post 2006-% of adults w/ BPD who experienced abuse/neglect in childhood
 - 52%--childhood onset
 - 34%--adolescent onset
 - 21%--early adult onset (19-29 yrs)
 - 20%--late adult onset (30+ yrs)

Posttraumatic Stress Disorder

- <u>Traumatic event</u> occurred
- The <u>child's reaction</u> involved intense fear, helplessness, or horror that might appear as disorganized or agitated behavior, with <u>new</u> and <u>persistent</u> examples of:
- *Reexperiencing* the trauma-- ≥ 1 of:
 - recurrent and intrusive distressing recollections (can be displayed as repetitive play)
 - recurrent distressing dreams (these may be frightening but w/o recognizable content)
 - acting or feeling like the traumatic event is recurring (this can include a sense of reliving the experience, illusions, hallucinations, and dissociative flashbacks)
 - intense psychological distress at exposure to internal or external reminders of the trauma
 - physiological reactivity on exposure to internal or external reminders

Posttraumatic Stress Disorder (cont'd)

- **Avoiding** reminders of the trauma /emotional numbing-->3 of:
 - avoiding thoughts, feelings, or conversations associated with the trauma
 - avoiding activities, places, or people that remind one of the trauma
 - forgetting an important aspect of the trauma
 - losing interest in activities
 - feeling disconnected from others
 - restricted range of affect (e.g., unable to have loving feelings)
 - expecting a shortened life (e.g., does not expect to have a career, marriage, children, or a normal life span)
- <u>Increased arousal--></u> 2 of:
 - difficulty falling or staying asleep
 - irritability or outbursts of anger
 - difficulty concentrating/hypervigilance
 - exaggerated startle response

Acute Stress Disorder

- Traumatic event occurred
- Child experienced an <u>intense emotional response</u>
- Reexperiencing, avoidance, and arousal ~PTSD
- During or after the trauma, <u>dissociative symptoms</u> occur-- > 3 of:
 - feeling numb, detached, or devoid of emotions
 - Feeling "in a daze" (unaware of surroundings
 - Derealization
 - Depersonalization
 - dissociative amnesia (i.e., can't recall an important aspect of the trauma)
- Lasts \geq 2 days and \leq 4 wks, occurs within month of event

Euphoria

- Normal: Special occasions, transitory
- Drug-induced disinhibition: Steroids, illicit drugs
- Carefully examine contextual cues to determine +/-

Irritability

- *Ubiquitous:* MDD, DD, ODD, PDD, Anxiety disorders, ADHD, schizophrenia
- Medication side-effects: stimulant wear off, SSRI adverse event
- Normal: hungry, hot, tired children

Grandiosity:

- *True talent:* check it out
- Peers unavailable: fantasy play may persist—can the child distinguish fantasy from reality?
- *Normal:* understand the
 - child's age
 - developmental context
 - persistence
 - effects on behavior (eg, playing Superman vs jumping out of the window because you are Superman)

- Decreased Need for Sleep
 - NOT the same as decreased sleep!
 - Ruminations of a depressed, anxious child
 - Poor sleep hygiene
 - Excessive environmental stimuli
 - Excitatory medications
 - Results in fatigue the next day
 - Full of energy
 - Common time to get in trouble (eg, sexual content on TV)

Pressured Speech

- Affective arousal: excited, nervous or angry children may speak quickly
- ADHD: often chronic "motor mouths"

Racing Thoughts

• Young/Low IQ/Language Disorder: Get an "interpreter"!

- Distractibility
 - ADHD: Establish a baseline. There needs to be a <u>change</u> from baseline for children with ADHD to count as a symptom of mania (not just when medications are wearing off)
 - Depression: impaired concentration common
 - Anxiety: preoccupation common
 - Learning disabilities: distracted while doing schoolwork

- Increased Goal Directed Activity
 - Psychomotor agitation: common and nonspecific
 - Gifted children: may be highly productive—work tends to be focused and accomplishments accrue
 - Depressed/anxious/traumatized children: may be agitated or demonstrate "nervous habits"

- Excessive Involvement in Pleasurable/Risky Activities
 - Sexual abuse: sexual acting out often anxious/compulsive in anture
 - Hypersexuality: often has erotic, pleasure-seeking quality, excessive, violates social norms (OK in private between consenting adults, NOT OK in public with a child initiating unwanted behavior toward adult)

Psychosis

 Perceptual distortions: falling asleep (hypnogogic)/waking up (hypnopompic)—see or hear things

Suicidality

- Not pathognomonic
- Critical to assess

Is It Tik Tok/You Tube?

Christina Caron, Teens Turn to TikTok in Search of a Mental Health Diagnosis, NYTimes, 10-29-2022

- Tourette, Dissociative Identity Disorder, Eating Disorders...Bipolar disorder
- Exacerbated by Covid and decreased face-to-face interactions
- A diagnosis "justifies" feeling "off"
- -: Can impede a careful diagnostic evaluation by a trained professional
- -: Can lead to erroneous treatment
- -: Can be seen as a "personality trait" not something to heal
- +: Can provide direction and path to appropriate treatment if accurate
- +: Can be a source of support

"I could run a clinic full of these kids – oh wait, I think I am." MAP Medical Director





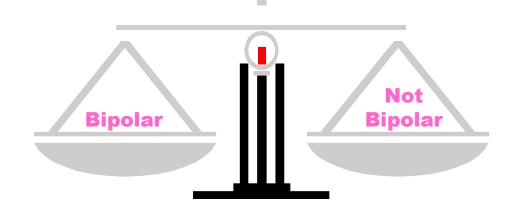
Diagnostic Difficulties

- Especially difficult to identify abnormally elevated mood, grandiosity
- Clear symptoms rarely observed in the office
- Lack of insight part of mania/hypomania must ask parent / caregiver
- Broad differential diagnosis (remember can be comorbid with bipolar disorder)
 - Moody ADHD/DBD
 - Unipolar depression
 - Severe Anxiety disorders
 - Substance Use disorders
 - PTSD
 - Reactive Attachment Disorder / Trauma
 - High functioning autism spectrum
- Often need repeated visits, longitudinal follow-up, remain humble





Pearls to help with diagnosis

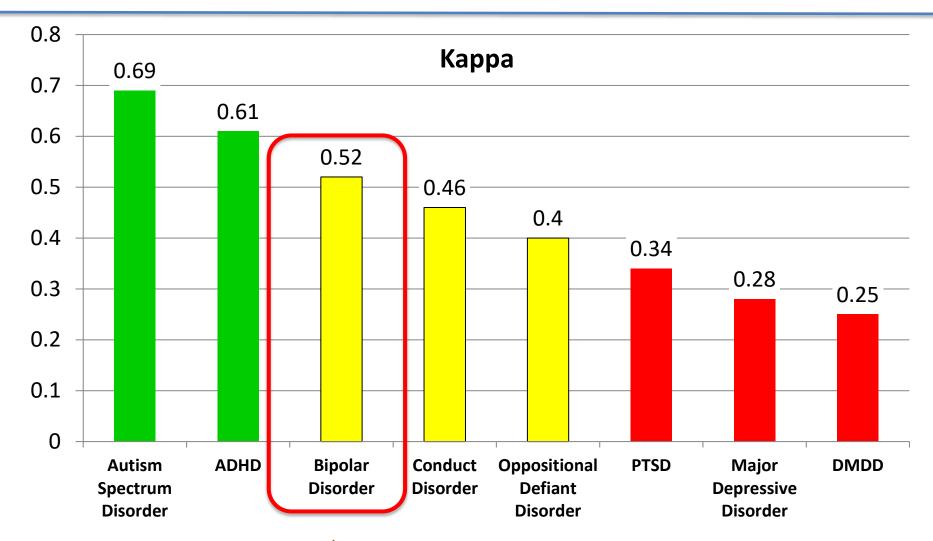


- Change compared to baseline, compared to peers in similar situations
- Presence of elation/euphoria, decreased need for sleep, grandiosity
- Look at timeline of symptoms not just current mental status
- Episodic worsening within chronic symptoms
- Family history (BP is highly heritable; Identical twin concordance ~ 30-70% vs. Fraternal ~ 10-20%)
- MDD: + psychosis, psychomotor retardation, childhood onset
- History of medication-induced manic symptoms





Test-Retest Reliability of DSM-5 diagnosis in youth



Research goal: Improve identification and accurate diagnosis of bipolar disorder in youth

- What are the clinical features of pediatric bipolar disorder?
- Do some children and adolescents with "subthreshold" presentations of mania/hypomania really have a bipolar illness?
- High-Risk Research Studies
 - Clinical High-Risk
 - Course and Outcome of Bipolar Youth (COBY)
 - Familial High-Risk
 - Pittsburgh Bipolar Offspring study (BIOS)

Course & Outcome of Bipolar Youth (COBY) Study

- Longitudinal follow-up of youth with BP-spectrum illness
- Funded by NIMH
- Pittsburgh, Brown, UCLA
- Referred Sample (outpatient, inpatient, advertisements)
- Ages 7 17
- Strict application of DSM-IV criteria for BP I (n=260) and BP II (n=33)
- Operationalized criteria Subthreshold Bipolar Disorder / BP-NOS (n=153)

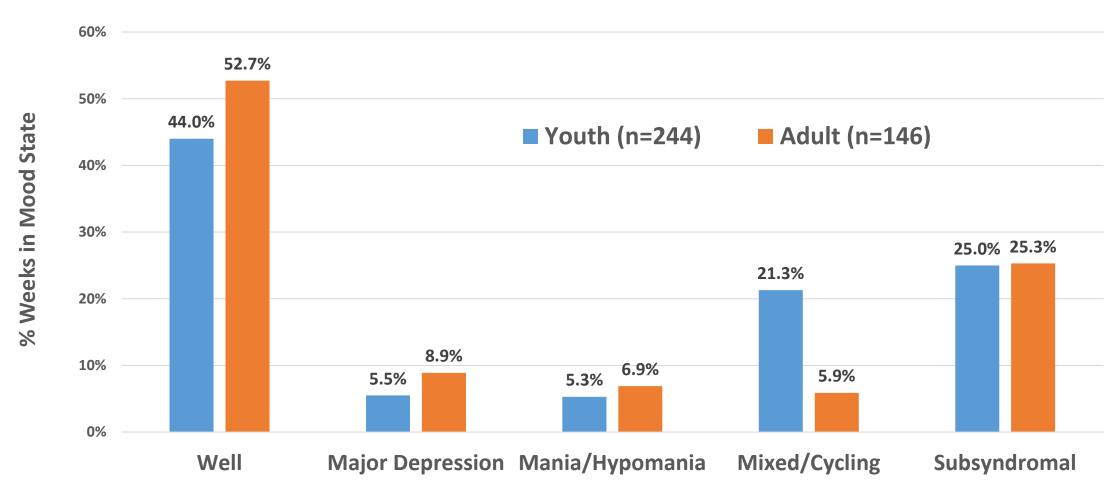
Manic Symptoms in Pediatric Clinical Samples with BP-I

	Mass General	WASH-U	Case Western	COBY BP-I
Elated/Elevated Mood	25%	89%	86%	90%
Irritability	84%	98%	92%	84%
Increased Energy	79%	100%	81%	90%
Grandiosity	57%	86%	83%	72%
Decreased Need for Sleep	53%	40%	72%	81%
Pressured Speech	68%	97%	81%	93%
Racing Thoughts	71%	50%	88%	74%
Distractibility	93%	94%	84%	89%
Motor Hyperactivity	90%	99%	81%	95%
Poor Judgment	90%	90%	86%	84%
Hypersexuality	25%	43%	32%	47%

Comorbid Disorders – Bipolar I Disorder

	Mass General	WASH-U	Case Western	COBY Age Adjusted	World Mental Health Survey Adults	
Attention-Deficit Hyperactivity D/O	87%	87%	70%	69 %	28%	
Oppositional Defiant D/O	86%	79%	47%	46%	30%	
Conduct D/O	41%	12%	17%	12%	28% D	Panic /O Panic
Anxiety D/O	54%	23%	14%	37%	76% Att	acks
Substance Use D/O	7%	0%	7%	5%	52%	

Bipolar I Longitudinal Course: Youth vs. Adults



Subthreshold BP Disorder - progression

- COBY Intake: 15 year old female
- Age 9: Panic attacks, frequent periods of anxiety
- Age 10: First major depressive episode (5 in total, with 1 serious suicide attempt, 2 inpatient hospitalizations)
- Age 13: First onset of brief hypomanias
 - Duration 1-2 days, maximum 2 days; ~50 lifetime
 - Elevated mood, cooking, cleaning fits, sleeps 3 hours/night, rapid speech, physically restless and energized, mildly inflated self-esteem
 - Could occur in the midst of major depressive episode
- Heavy THC use in late adolescence
- Schizoaffective Disorder, Bipolar Type as a young adult

COBY Intake: Subthreshold BP vs. "Full" BP-I

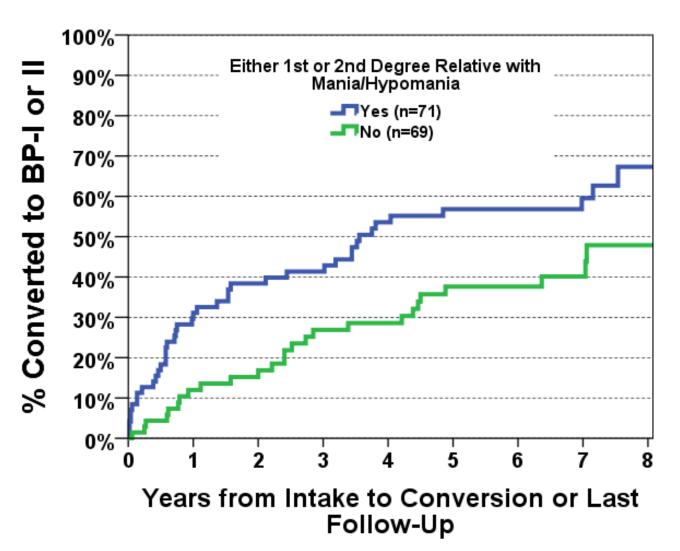
Similarities

- Types of symptoms & number to meet DSM-IV criteria
- Comorbidity
- Rates of prior Major Depressive Episode
- Family History (inc. BP and depression)
- Cross-sectional symptom severity & impairment at intake

Differences

- Duration of episodes (had many short episodes)
- Lower severity of symptoms at most severe episode
- Lower severity of impairment at most severe episode
- Lower rates of severe features (psychosis, suicide attempts)

Family History at Intake associated with progression to BP-I or II



Log Rank (Mantel-Cox) $\chi^2 = 6.5$ p=.01

Median 6.9 years of follow-up

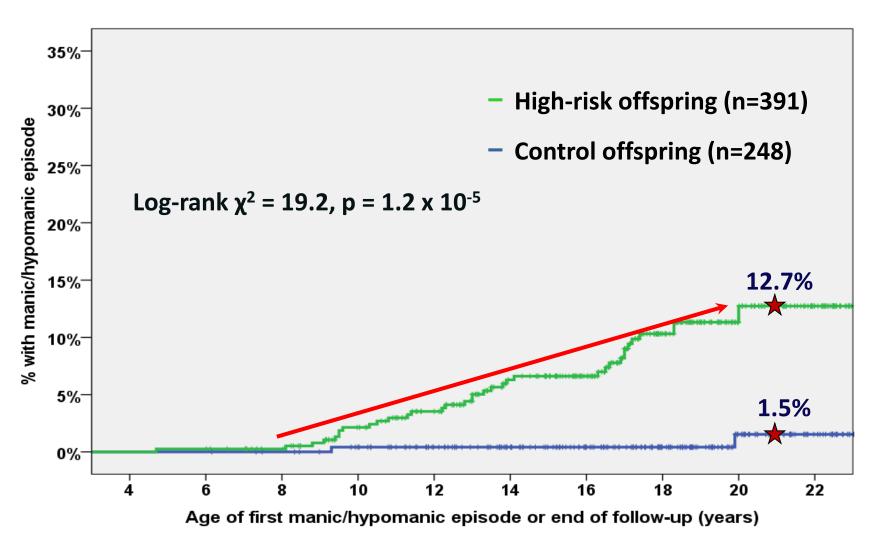
33 (24%) converted to BP-I (9 initially converted to BP-II)

35 (25%) converted to **BP-II**

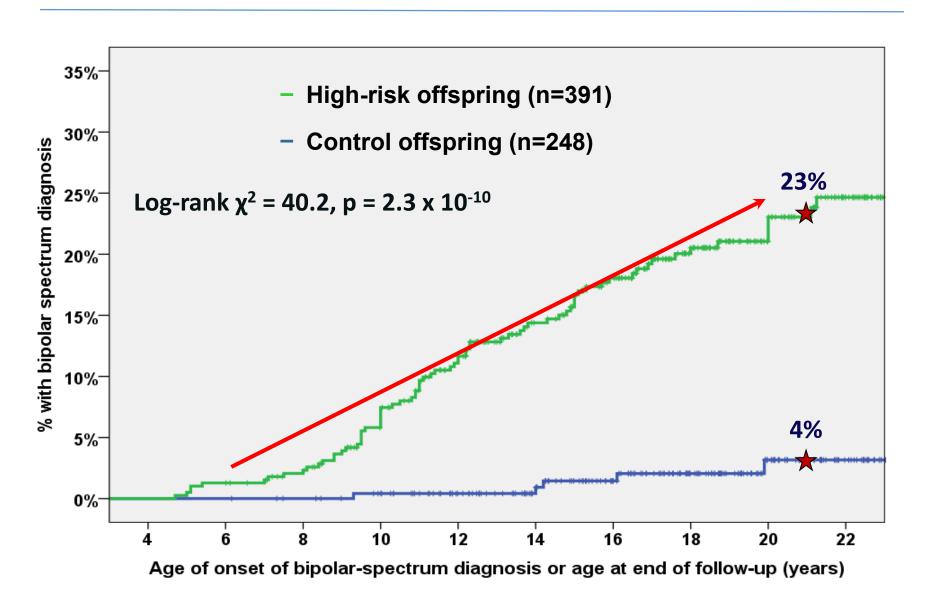
Pittsburgh Bipolar Offspring Study Design

- Case-control high-risk study
- Recruit parents who have bipolar disorder and child/adolescent offspring
- Demographically match control parents with child/adolescent offspring
- Examine offspring (blind to parent diagnosis) every 2 years
- 91% had follow-up; average 2.7 follow-up assessments

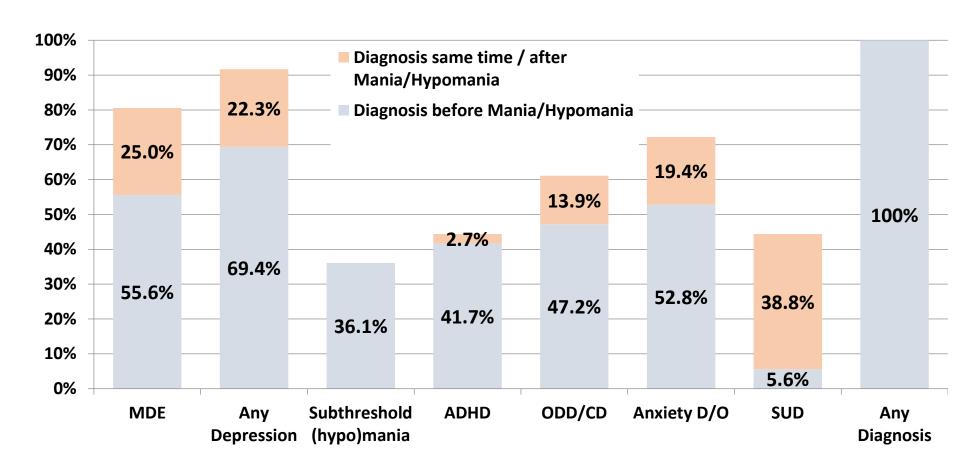
Age of Onset of 1st Manic / Hypomanic Episode



Age of onset of BP-spectrum disorder (includes subthreshold (hypo)mania)

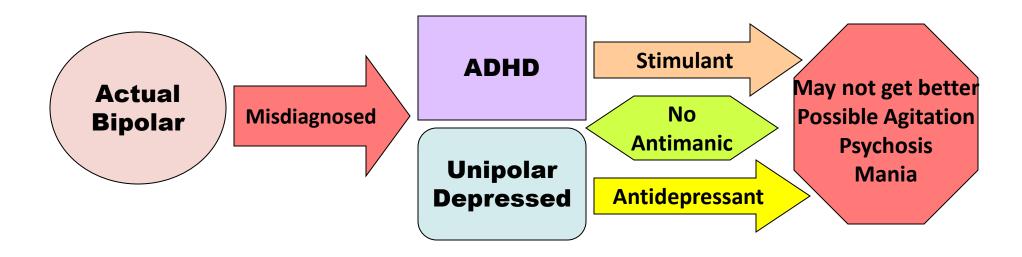


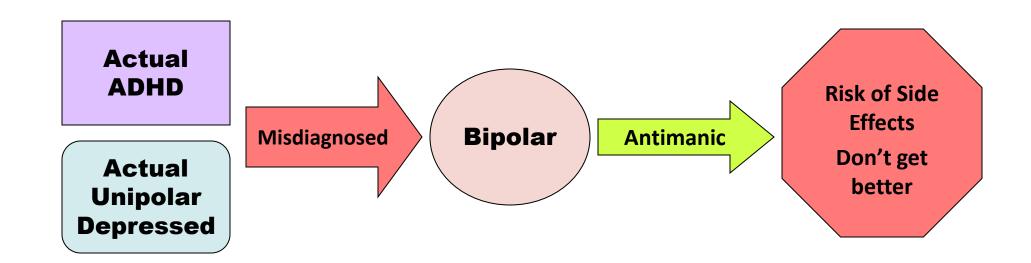
Onset of depression and comorbid diagnoses relative to onset of 1st Manic/Hypomanic Episode (n=36)



Onset established when full diagnostic criteria were met

Diagnostic Implications for medication treatment





Evidence-Based Psychotherapy for Bipolar Disorder

Goldstein et al, 2017, Bipolar Disorders, 19(7): 524-543

Level of Evidence	Psychosocial Treatment	Citation
Well Established	Family Psychoeducation & Skill Building	Fristad et al, 2009 Miklowitz et al, 2008 West et al, 2014
Probably Efficacious		
Possibly Efficacious	Cognitive-Behavioral Dialectical Behavioral Interpersonal & Social Rhythm	Feeny et al,2006 Goldstein et al, 2007 Hlastala et al, 2010

Four Common Ingredients of Psychotherapy

- psychoeducation
- family-based
- emotion regulation
- symptom management

Books for Children

Brandon & the Bipolar Bear -- T. Anglada

My Bipolar, Roller Coaster, Feelings Book & Workbook—*B. Hebert*

The Storm in My Brain -- Child & Adolescent Bipolar Foundation (CABF)

Kid Power Tactics for Dealing with Depression -- N. & S. Dubuque

Matt, The Moody Hermit Crab -- C. McGee

Anger Mountain—B. Hebert



Books for Adolescents

Mind Race: A Firsthand Account of One Teenager's Experience with Bipolar Disorder – *P.E. Jamieson & M.A. Rynn*

- When Nothing Matters Anymore: A Survival Guide for Depressed Teens -- B. Cobain
- Recovering from Depression: A Workbook for Teens -- M. E. Copeland & S. Copans
- Monochrome Days: A First-Hand Account of One Teenager's Experience with Depression *Irwin, Evans & Andrews*





Children's Literature

The Phoenix Dance

- •Dia Calhoun, award winning author
- •Farrar, Straus & Giroux, NY, 2005

- •Based on the Grimms' Twelve Dancing Princesses
- •Explores the experience of bipolar disorder in an adolescent girl





Books for Parents

Raising a Moody Child: How to Cope with Depression and Bipolar Disorder -- M.A. Fristad & J.S. Goldberg-Arnold

The Bipolar Teen: What You Can Do to Help Your Child and Your Family – D.J. Miklowitz & E.L.George

New Hope for Children & Teens with Bipolar Disorder—B. Birmaher

The Childhood Bipolar Disorder Answer Book- T. Anglada & S.M. Hakala

The Bipolar Child -- D. & J. Papalos





Books for Adults

Living Without Depression & Manic Depression -- M. E. Copeland

An Unquiet Mind -- K. Redfield Jamison

Clinician's Guide to Bipolar Disorder – Miklowitz & Gitlin

The Bipolar Survival Guide: What You and Your Family Need to Know --D.J. Miklowitz





Educational Websites

Information re: BPD for Parents, Children and Educators

- www.bpchildren.com
- •www.thebalancedmind.org (Depression and Bipolar Support Alliance)

Special Education Advocacy -- <u>www.wrightslaw.com</u>

National Association of Therapeutic Schools and Programs— <u>www.natsap.org</u>

Internet Special Education Resources (ISER)

•www.iser.com





Groups/Websites

- National Alliance on Mental Illness (NAMI): 1-800-950-6264 <u>www.nami.org</u>
- (National) Mental Health America (NMHA): 1-703-684-7722 www.nmha.org
- Depressive & Bipolar Support Alliance (DBSA): 1-800-826-3632 www.dbsalliance.org
 - Balanced Mind Parent Network
 - MoodCrewTM
- Families for Depression Awareness (FFDA): 1-718-890-0220 www.familyaware.org
- Juvenile Bipolar Research Foundation (JBRF): 1-866-333-5273, www.bpchildresearch.org
- BP Children: 1-732-909-9050 (fax) www.bpchildren.com





Conclusion

Bipolar spectrum disorders CAN be diagnosed in youth

•Take your time and be thorough

Treatment should be multi-modal

Therapy should include the child and family





Thank you



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