

**Child & Adolescent  
Psychiatry:  
Whirlwind Tour of ADHD  
Bipolar Disorder**

Craigian Usher, MD  
Oregon Health & Science University

---

---

---

---

---

---

---

---

**Disclosure**

- Please note that off-label prescription use described.
- No conflicts of interest to report.

---

---

---

---

---

---

---

---

Whirlwind Tour: One Hour of  
Child & Adolescent Psychiatry

- Define Wellness vs Illness
- Foci
  - 1 Attention-deficit/Hyperactivity Disorder
    - Diagnosis
    - History
    - Neurodevelopmental Features
    - Treatment
  - 2 Bipolar Affective Disorder
    - Diagnosis
    - Controversy
    - Treatment
    - Monitoring

OREGON HEALTH & SCIENCE UNIVERSITY

---

---

---

---

---

---

---

---

## Health

- A sign of health in the mind is the ability of one individual to enter imaginatively and accurately into the thoughts and feelings and hopes and fears of another person; to allow the other person to do the same to us.

D.W. Winnicott (1970)

---

---

---

---

---

---

---

---

“Sam” is 13yo boy who remarks:  
“Every time I open my mouth  
something stupid comes out.  
People think I’m dumb.”

---

---

---

---

---

---

---

---

## Divorcing Parent

- “Sarah” is a 9yo whose parents have divorceed. Sarah’s mother, furious about her ex-husband’s infidelity, ridicules him incessantly. “Sarah” must spend M,T,W at her mother’s and goes to her father’s home on Th, Fr and every 3rd weekend.

---

---

---

---

---

---

---

---

## Nick

- “Nick” is a 7yo boy who, despite adequate treatment for ADHD (he is more focused, less hyperactive, able to wait in lift lines) continues to push his ski school classmates; asked to explain his behavior, he replies: “Don’t you know? *I’m* a bad boy!”

---

---

---

---

---

---

---

---

## Mental Health

- The ability to work and love.
- The ability to learn *relatively* free of distraction from ambient, non-related, or irrational thoughts, fears (of ridicule, of failure, or disappointment), and/or painful emotions.

---

---

---

---

---

---

---

---

**child & adolescent  
psychiatry:  
a whirlwind tour**

**ADHD**

---

---

---

---

---


---

---

---

## ADHD

- The hallmarks of DSM-IV defined Attention-Deficit/Hyperactivity Disorder are:
  - Inattention (6 or > symptoms 6mos).
  - Hyperactivity & Impulsivity (6 or > symptoms for 6mos).
  - Symptoms present before age 7.
  - Some impairment in two or > settings with major impairment in at least one.
  - Does not happen during PDD, Schizophrenia, or another psychiatric disorder.




---

---

---

---

---

---

---

---

## ADHD: DSM-IV

- Inattention
  - Often does not give close attention to details or makes careless mistakes in schoolwork, work, or other activities.
  - Often has trouble keeping attention on tasks or play activities.
  - Often does not seem to listen when spoken to directly.
  - Often does not follow instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions).
  - Often has trouble organizing activities.
  - Often avoids, dislikes, or doesn't want to do things that take a lot of mental effort for a long period of time (such as schoolwork or homework).
  - Often loses things needed for tasks and activities (e.g. toys, school assignments, pencils, books, or tools).
  - Is often easily distracted.
  - Is often forgetful in daily activities.

---

---

---

---

---

---

---

---

## What is ADHD?

- Hyperactivity
  - Often fidgets with hands or feet or squirms in seat.
  - Often gets up from seat when remaining in seat is expected.
  - Often runs about or climbs when and where it is not appropriate (adolescents or adults may feel very restless).
  - Often has trouble playing or enjoying leisure activities quietly.
  - Is often "on the go" or often acts as if "driven by a motor."
- Impulsivity
  - Often blurts out answers before questions have been finished.
  - Often has trouble waiting one's turn.
  - Often interrupts or intrudes on others (e.g. butts into conversations or games).

---

---

---

---

---

---

---

---

## Inattention & Hyperactivity Nomenclature in the 20th Century

- 1902-- George Still, British pediatrician characterized it as a "dysfunction of moral control."
- 1937-- Charles Bradley called it "organic behavior syndrome."
- 1947-- Alfred Strauss and Laura Lehtinen used the term "minimal brain damage syndrome"
- 1962-- Clements & Peters coined the term "minimal brain dysfunction."
- 1968-- DSM-II brought the term "hyperkinetic syndrome of childhood" into vogue.
- 1980-- DSM-III the term ADD gained prominence.
- 1987-- DSM-III-R brought us ADHD.
- 1992-- Edward Hallowell "attention surplus syndrome"; great positive spin...unfortunate acronym (see Steinberg *NYT* Op-Ed piece).

---

---

---

---

---

---

---

---

## ADHD Highlights

- Neuropsychological data suggests: slower processing speed, working memory and impaired executive function (WISC-IV, Stroop, Wisconsin Card Sorting, Rey-Osterrieth, TOVA, Conners CPT)
- Less activation of reward center (NA) and subsequently less frontal lobe engagement on neuroimaging studies.
- More motor vehicle collisions
- Increased nicotine dependence
- More likely to be rejected by peers

---

---

---

---

---

---

---

---

Red Yellow Blue Red Green Yellow Blue Red Green  
Yellow Blue Red Green Red Green Yellow Blue Yellow  
Red Green Blue Green Yellow Red Blue Blue Green  
Red Yellow Green Blue Red Green Yellow Blue Red  
Red Yellow Blue Blue Green Red Yellow Blue Red  
Green Yellow Blue Red Green Yellow Blue Red Green  
Red Green Yellow Blue Yellow Red Green Blue Green  
Yellow Red Blue Blue Green Red Yellow Green Blue  
Red Green Yellow Blue Red Red Yellow Blue Blue  
Green Red Yellow Blue Red Green Yellow Blue Red  
Green Yellow Blue Red Green Red Green Yellow Blue  
Yellow Red Green Blue Green Yellow Red Blue Blue  
Green Red Yellow Green Blue Red Green Yellow Blue  
Red Red Yellow Blue Blue Green

---

---

---

---

---

---

---

---

## ADHD - Prevalence

- 2003 MMWR Data:
  - 2-18% of children ages 4-17
  - Approximately 7.8%
  - Low: CO 5%
  - High: Alabama 11%
  - 4.3% had ADHD diagnosis and were taking medication



OREGON  
HEALTH  
& SCIENCE  
UNIVERSITY

---

---

---

---

---

---

---

---

## What are the chief treatments for ADHD?

- Non-Pharmacologic Treatments
  - Psychotherapy (CBT, etc)
  - Coaching
  - Executive Function Tutoring
  - Programs like Cogmed
- Stimulants
  - -Methylphenidate (Ritalin, Focalin, Concerta)
  - -Amphetamine Salts (Adderall, Adderall XR, Vyvanse)
- Non-Stimulants
  - Atomoxetine (Strattera)
  - Bupropion (Wellbutrin)
  - Omega-3 FA
  - Alpha agents (Clonidine, Tenex)

---

---

---

---

---

---

---

---

## Stimulants

- Amphetamine Salts
- -Adderall (4-6hrs)
  - -Adderall XR (8hrs)
  - -Vyvanse (?12hrs)\*

- Methylphenidate
- Ritalin (3-4 hrs)
  - Focalin (3-5hrs)
  - Ritalin SR (3-8hrs)
  - Methylin ER (8hrs)
  - Ritalin LA (8hrs)
  - Metadate CD (8hrs)
  - Concerta (8-10hrs)

---

---

---

---

---

---

---

---

## The MTA

- National Institute of Mental Health
- Multicenter (6 University Med Centers) Trial
- 579 school-aged children (ages 7-9)
- Medication Alone
- Medication + CBT
- CBT Alone
- Community Treatment
- Primary Symptoms Improved w/ Meds
- Anxiety symptoms, academic performance, oppositionality, parent-child relations, and social skills improved with combination



---

---

---

---

---

---

---

---

## What are the chief side-effects associated with ADHD medications?

- 1 Headache
- 2 Insomnia
- 3 Appetite Suppression and Growth Decrease\*
- 4 Mood changes
- 5 Cardiac Risks (increases in HR, BP)\*
- 6 Abuse (40% in one study, 7million)
- 7 Tics?

\*\*Please see Towbin K. Paying attention to stimulants: height, weight and cardiovascular monitoring in clinical practice. *J Am Acad Child Adolesc Psychiatry.* 2008;47(9):1-4

---

---

---

---

---

---

---

---

child & adolescent  
psychiatry:  
a whirlwind tour

## Affective Disorders

---

---

---

---

---

---

---

---

## Childhood Depression

- The DSM-IV defines depression as depressed mood for two weeks along with 5 of the following:
  - S  sleep disruption
  - I  diminished interest
  - G  guilt
  - E  low energy
  - C  poor concentration
  - A  appetite disruption
  - P  psychomotor agitation/ret
  - S  suicide / death focus

---

---

---

---

---


---

---

---

## Pediatric Depression Facts

- 2% in children, 4-8% in adolescents
- Male to Female ratio is 1:1 during childhood, 1:2 in adolescence
- 5-10% of children and teens have subsyndromal depressive symptoms
- Children may have mood lability, irritability, low frustration tolerance, temper tantrums, somatic complaints, and social withdrawal.
- Fewer melancholic symptoms
- Recurrence rates of up to 70% in 5 years
- Geller (1994) notes that 20-40% will develop bipolar disorder




---

---

---

---

---

---

---

---

## What are the treatments of depression for children and adolescents?

- Psychotherapy
  - Cognitive-Behavioral Therapy / Interpersonal Psychotherapy
  - Psychodynamic Psychotherapy
  - Family Therapy
  - Group Therapy
- Medications
  - SRIs
  - TCAs
  - Others
    - Wellbutrin
    - Effexor XR, Cymbalta

---

---

---

---

---

---

---

---

## Antidepressants and Kids

- **Two chief concerns with medications:**
  - **Efficacy (NNT: 10 with response rates 40-70% however placebo is 30-60%); TADS data showed remission rates: 37% in combination treatment and 23% med only**
  - **Suicidality and the Black Box Warning (NNH: 112)**

---

---

---

---

---

---

---

---

## Chief Side Effects

- **Gastrointestinal Problems**
- **Sedation**
- **Sexual Side-effects**
- **Generation of Mania**
- **Increase Suicidality**

---

---

---

---

---

---

---

---

## What is bipolar disorder?

**Classical Definition: elated or irritable mood + DIGFAST**

**New Definition: Chronic, Severe Mood Dysregulation (Tantruming)**

---

---

---

---

---


---

---

---

## Classical Definition

- Previously referred to as manic-depression, bipolar disorder involves manic bouts which are classically marked by one week (or less if hospitalized) being elated or irritable plus:
- D  distractibility
- I  impulsivity
- G  grandiosity
- F  flight of ideas
- A  ↑ goal-directed activities
- S  ↓ need for sleep
- T  talkativeness




---

---

---

---

---

---

---

---

---

---

## Presentation: Adults vs Children

Characteristic	Adult	Childhood
<b>Elated Mood</b>	Euphoria. No on top of the world.	Silly, happy, goofy, giddy, everything is a joke
<b>Irritable Mood</b>	Angry. Neverbody out to get me.	Intense regression. NNO
<b>Distractibility</b>	Moving from project to project at work and home.	Drawing, to playing, to TV watching, to grabbing dog, to talking about school, sports.
<b>Impulsivity</b>	1-Sexual indiscretion or increased drug use 2-Reckless driving 3-Spending sprees 4-Sudden traveling 5-driving hours on a whim	1-Mooning, masturbating, urinating some place inappropriate. 2-Running into traffic. 3-Demanding everything or giving possession away. 4-Running out of the house without telling anyone
<b>Grandiosity</b>	Mild-Taking on one's boss Severe-Persecutory delusion	Mild-Picking a fight one cannot win. Severe-Also, persecutory delusion
<b>Flight of Ideas</b>	Racing thoughts that one cannot slow down.	My brain on fire. I can't slow it down.
<b>Goal-directed Activities</b>	Super productive or ambitious 1-Socially 2-Sexually 3-Work 4-School	Similar 1-Texting friends, emailing friends above and beyond normal. Seeing connections where they do not exist 2-Similar 3-House cleaning 4-Taking on vast projects, studying
<b>Decreased Need for Sleep</b>	Different from insomnia.	Same.

---

---

---

---

---

---

---

---

---

---

## Mania

- D- racing around room
- I- would go on bouts of needing little sleep, staying up writing notes for family and classmates.
- G- would often leap from car rooftop; when younger needed to have door locked otherwise would run out onto street.
- F- **“Dr. Usher, can you help me control the thoughts in my head. I feel like there’s a video game going on in there, with people fighting.”**
- A- “We can’t get him to school.”
- S- Up all night, grabbing snacks, playing video games, doing writing projects.
- T- “He talks constantly. Doesn’t wait for a response, just talks!”

---

---

---

---

---

---

---

---

---

---

## “Severe Mood Dysregulation”

- Tantrums / Episodic Rage which features aggression out of proportion to what would be expected and occurring with great frequency, intensity and duration.
- Chronic, baseline mood lability/irritability.
- The broadening of the definition has led to a 40-fold increase in the diagnosis between 1994-2003.




---

---

---

---

---

---

---

---

## Bipolar Disorder

- Estimated lifetime prevalence of bipolar I disorder is 0.4-1.6%
- Estimates expand to 6% when “spectrum cases” are included.
- Historically, surveys of adults note onset before age 10 in only 0.3-0.5%, yet the rate of adult bipolar (1%) is similar to childhood rates (1%)...

---

---

---

---

---

---

---

---

## Childhood Bipolar?

30 with severe mood dysregulation (13.45 +/- 2.86yo)	33 with narrow phenotype bipolar disorder (11.58 +/- 1.88)
15-no axis 1 disorder	8-no axis 1 d/o
1-bipolar disorder	14-bipolar disorder
16-depressive disorder	17-depressive disorder*
11-substance abuse/depend	16-substance abuse/depend
7-anxiety disorder	9-anxiety disorder

Brotman et al. Parental diagnoses in youth with narrow phenotype bipolar disorder or severe mood dysregulation. *Am J Psychiatry*, 2007;164(8):1238-41.

---

---

---

---

---

---

---

---

## Bipolar & MDD

- Approximately 20% of youths with MDD go on to experience manic episodes.
- Risk factors:
  - Depressive episode with rapid onset, psychomotor retardation and psychotic features
  - Family history of affective disorders
  - History of mania or hypomania with antidepressants

---

---

---

---

---

---

---

---

## More confusion... personality disorders (and their links to family chaos and disrupted attachments)

- Frantic efforts to avoid real or imagined abandonment
- A pattern of unstable and intense interpersonal relationships alternating between extremes of idealization and devaluation.
- Identity disturbance: markedly and persistently unstable self-image or sense of self.
- Impulsivity in terms of promiscuity, binge-eating, substance abuse, reckless driving
- Affective instability due to marked reactivity of mood
- Chronic feelings of emptiness, worthlessness
- Inappropriate anger
- Transient, stress-related paranoid ideation, delusions, or severe dissociative symptoms.

---

---

---

---

---

---

---

---

## What to do: *AACAP Guidelines*

- Do not diagnose bipolar disorder in youths with manic symptoms lasting hours to less than four days or for those with chronic, manic-like symptoms.
- Consider supplementing diagnostic interview with rating scales (Young Mania Rating Scale, Parent-YMRS\*, Mood Disorder Questionnaire).
- Evaluate for suicidality, comorbid disorders (SA), psychosocial stressors, and medical problems
- Psychotherapy + Pharmacotherapy

\*Available at <http://www.healthyplace.com/communities/bipolar/p-ymrs.asp>

---

---

---

---

---

---

---

---

## What to do: AACAP Guidelines

- Use agents that are FDA-approved for adults (Li, aripiprazole, risperidone).
- For assessment and treatment purposes, check CBC, CMP with fasting glucose, TFTs, UA, Utox, Stox, along with lipid profile (HDL, LDL, TG), BMI, and waist circumference. Don't forget a B-hcg! Pb levels too for children under 7. EKG for Li.
- For atypicals: BMI monthly for 3mos; BP, glucose, and lipids at 3mos then yearly.



---

---

---

---

---

---

---

---

## Red Flag Item on "Atypicals"

- Atypical Neuroleptics & Metabolic Syndrome (listed most to least likely)
  - Olanzapine (Zyprexa, Zydis)
  - Quetiapine (Seroquel)
  - Risperidone (Risperdal)
  - Ziprasidone (Geodon)
  - Aripiprazole (Abilify)

---

---

---

---

---

---

---

---

## Movement Disorders

- Akathisia-- "inner restlessness"
- Dystonia-- sustained muscle contractions leading to writhing, twisting, abnormal posturing
- Tardive Dyskinesia-- grimacing, tongue protrusion, lip smacking, puckering and pursing of the lips, and rapid eye blinking
- Withdrawal Dyskinesia-- transient dyskinesia upon lowering or withdrawing dopamine-blocking medications
- Lithium Tremor-- 8-12hz
- Regular Abnormal Involuntary Movement Scale (AIMS) reviews

---

---

---

---

---

---

---

---

## References & Resources

- Practice parameter for the assessment and treatment of children and adolescents with depressive disorders. *J Am Acad Child Adolesc Psychiatry* 2007;46(11):1503-1526
- Practice parameter for the assessment and treatment of children and adolescents with bipolar disorder. *J Am Acad Child Adolesc Psychiatry* 2007;46(1):107-125
- Cummings CM, Fristad MA: Pediatric bipolar disorder: recognition in primary care. *Curr Opin Pediatr* 2008; 20(5):560-5

---

---

---

---

---

---

---

---

## Resources

- *Is Your Child Bipolar?: The Definitive Resource on How to Identify, Treat, and Thrive with a Bipolar Child* by Mary Anne McDonnell and Janet Wozniak
- *New York Times Magazine* "The Bipolar Puzzle" by Jennifer Egan

---

---

---

---

---

---

---

---