Depression and Anxiety in Adolescents: Diagnosis and Treatment

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Disclosures

- Dr. Kumra has received grant support and/or serves as a consultant to Astra-Zeneca, Bristol Meyers Squibb and Schering Plough
- Off-label use of some psychotropic medications in children will be discussed in this presentation

Prevalence of Certain Pediatric Mental Illnesses

Anxiety Disorders	13.0%
Disruptive Disorders	10.3
Mood Disorders	6.2
Substance Use Disorders	2.0
Any Disorder	**20.9**

Shaffer, D., et al. The NIMH Diagnostic Interview Schedule for Children Version 2.3 (DISC-2.3): Description, acceptability, prevalence rates, and performance in the MECA Study. Methods for the Epidemiology of Child and Adolescent Mental Disorders Study. JAACAP. 1996;35, 865–877.

Anxiety Disorders in Children and Adolescents

- Epidemiology
- Symptoms
- Treatment arsenal
  - Psychotherapy
  - Pharmacotherapy

Prevalence of Anxiety Disorders

- Range from 6% - 20%
- Girls > boys
  - specific phobia
  - panic disorder
  - separation anxiety
  - agoraphobia

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

"Normal" Anxiety

- Infants – fear of loud noises, startle, strangers
- Toddlers – fear of imaginary creatures, darkness, separation
- School-age – worry re: injuries, storms
- Teens – worry re: school performance, social competence, health issues

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

Types of Anxiety Disorders

- Separation Anxiety Disorder
  - Fear/distress re: separation from home/attachment figure(s)
- Specific Phobia
  - Fear of a particular object/situation
- Generalized Anxiety Disorder
  - Chronic, excessive worry in a number of areas + somatic sx

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

Types of Anxiety Disorders

- Social Phobia
  - Worry re: embarrassing/humiliating self
- Selective Mutism
  - Failure to speak in certain situations
- Panic Disorder
  - Uncued panic attacks with or without agoraphobia

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

Differential Diagnosis of Anxiety Disorders

- Psychiatric
  - ADHD, PDD, psychosis, learning disabilities, bipolar, depression
- Physical
  - Hyperthyroidism, caffeine, migraine, asthma, seizure disorder, lead intoxication
- Medications
  - Antiasthmatics, sympathomimetics, steroids, SSRIs, antipsychotics

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

Treatment of Anxiety Disorders

- Psychotherapy
  - Cognitive Behavior Therapy
  - Psychodynamic Therapy
- Pharmacology
  - SSRI – Selective Serotonin Reuptake Inhibitor
  - Others

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Pharmacotherapy of Anxiety Disorders

- SSRIs
  - No empirical evidence that one is more effective than another
  - Start at low doses, monitor side effects, titrate based on clinical response/tolerability
- Others
  - TCAs, buspirone, benzodiazepines, SNRIs

Connolly SD, Bernstein GA, and the AACAP Work Group on Quality Issues. J Am Acad Child Adolesc Psychiatry. 2007;46(2):267-83.

Prevalence of Pediatric Major Depressive Disorder

- Major Depressive Disorder
  - Total: ~53 million U.S. children ages 5-17
  - ~5%-10% have subsyndromal MDD = ~4 million
  - ~2%-8% have MDD = ~2.1 million
    - ~60% have suicidal ideation = ~1.2 million
    - ~30% make a suicide attempt = ~630,000

US Census Bureau. http://www.census.gov/popest/national/asrh/NC-EST2007/NC-EST2007-02.xls. Accessed November 23, 2008.

Birmaher B, Brent D, and the AACAP Work Group on Quality Issues, et al. Practice parameter for the assessment and treatment of children and adolescents with depressive disorders. J Am Acad Child Adolesc Psychiatry. 2007 Nov;46(11): 1503-26.

Types of Depressive Disorders

- Major Depressive Disorder
- Dysthymic Disorder
- Adjustment Disorder
- Bereavement
- Bipolar Disorder
- Substance-Induced Depressive Disorder
- Non-Psychiatric Causes

Assessment of Pediatric Depressive Disorders

- Physical/Medical Differential Diagnosis
  - hypothyroidism
  - mononucleosis, anemia, certain cancers, autoimmune diseases, premenstrual dysphoric disorder, chronic fatigue syndrome
  - stimulants, corticosteroids, contraceptives

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Major Depressive Episode

- Depressed mood or loss of interest/pleasure in life activities + 4 of:
  - Weight change
  - Sleep disturbance
  - Psychomotor change
  - Fatigue/low energy
  - Worthlessness/guilt
  - Poor concentration
  - Thoughts of death/dying/suicide
- 2+ weeks

Adapted from: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000. http://www.behavenet.com/capsules/disorders/mjrdepep.htm.

Major Depressive Disorder (MDD) in Children and Adolescents

- Epidemiology and impact of illness
- Symptoms of MDD
- Developmental impact of MDD
- Treatment arsenal
  - Psychotherapy
  - Pharmacotherapy
- Role of psychoeducation

Epidemiology of Pediatric Depressive Disorders

- MDD Prevalence
  - ~2% in children; ~4-8% in adolescents
- MDD Female:Male ratio
  - 1:1 in children; 2:1 adolescence
- Dysthymic Disorder
  - 0.6% to 1.7% in children
  - 1.6% to 8.0% in adolescents

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Pediatric MDD Differences in Clinical Presentation

- Children:
  - Anxiety and somatic complaints
  - Irritability/frustration manifested as temper tantrums
  - Less able to verbalize feelings
  - Less frequently make serious suicide attempts

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pediatric MDD Differences in Clinical Presentation

- Adolescents:
  - Sleep and appetite disturbances
  - Suicidal ideation and suicide attempts
  - More functionally impaired than children
  - More behavioral problems than adults
  - Fewer neurovegetative symptoms than adults

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pediatric MDD Developmental Impact of MDD

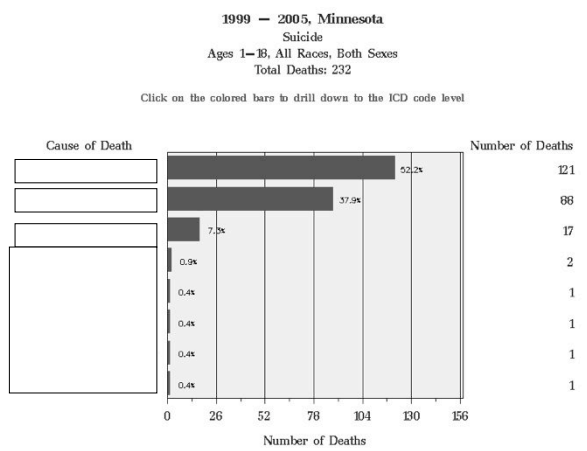
- Untreated MDD can result in:
  - Impairment in the attachment bond between parent and child
  - Impairment in the child's development of social, emotional, cognitive, and interpersonal skills
  - High risk of suicidality, substance abuse, physical illness, early pregnancy
  - Poor work, academic, and psychosocial functioning
- Relapses of MDD can derail the process of improving psychosocial functioning

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

10 Leading Causes of Death – MN 1999-2005; ages 1-18 yoa

1. [redacted] – 1055	6. [redacted]
2. [redacted] - 232	7.
3. [redacted]	8.
4.	9.
5. Congenital Anomalies – 124	10. Benign Neoplasms - 16

WISQARS™. Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.



WISQARS™. Produced By: Office of Statistics and Programming, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.

Pharmacological Treatment of Pediatric Major Depressive Disorder

- Three Phases of Treatment
  - Acute: seeking response/remission
    - Beck Depression Inventory ≤9
    - Children's Depression Rating Scale ≤28
  - Continuation: consolidate gains; avoid relapse
  - Maintenance: longer term treatment for selected patients

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Pediatric MDD Acute Phase Treatment: Psychotherapy

- CBT
  - Resolve the patient's distorted views of themselves, the world, and their future
  - Amongst the most studied in kids
- Psychodynamic
  - Help youth understand themselves, identify feelings, interact more effectively with others
- IPT
  - Focus on grief, interpersonal roles, disputes, role transitions
- Behavior therapy, supportive and group psychotherapies also useful

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pediatric MDD
Acute Phase Treatment: Family Therapy

- Addressing family dynamics that contribute to the child's depression
- Gives parents skills to manage the child's irritability, defiance, and isolation
- Gives the clinician an opportunity to assess the parents' mental health and to suggest treatment if appropriate

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pediatric MDD
Role of Psychoeducation

- Important for patient and family; education enhances treatment adherence
- Education re: MDD as an illness helps:
  - ↓ parental self-blame
  - ↓ blaming the patient
  - ↑ the parent's identification of their own symptoms
- Education of teachers can enhance identification of MDD in kids

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pharmacological Treatment of Pediatric MDD in the Acute Phase

- Studies: high placebo response
- If using a med…
  - SSRIs (in particular fluoxetine)
  - Possibly bupropion (particularly if comorbid ADHD)
  - SNRIs second line
  - TCAs not supported
- Assess @ 4 week intervals; titrate to remission
- If no improvement by week 8, consider alt agent

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Antidepressants

- SSRI – selective serotonin reuptake inhibitors
- SNRI – serotonin norepinephrine reuptake inhibitors
- Others – bupropion, mirtazapine, trazodone
- TCA – tricyclic antidepressants
- MAOI – monoamine oxidase inhibitors

Antidepressants: SSRI's

- fluoxetine (Prozac®, Prozac Weekly®)
- sertraline (Zoloft®)
- paroxetine (Paxil®, Paxil CR®)
- citalopram (Celexa®) & escitalopram (Lexapro®)
- All ↑ serotonin levels
- S/E: sexual side effects, sleep disturbance, weight gain, suicidality

Common SSRI Side Effects

- Gastrointestinal symptoms
- Sleep changes (e.g., insomnia/somnolence, vivid dreams, nightmares, impaired sleep)
- Restlessness or akathisia
- Diaphoresis
- Headaches
- Changes in appetite (increase or decrease)
- Sexual dysfunction

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Possible SSRI Side Effects

- ~3%-8% may have increased impulsivity, agitation, irritability, silliness, and "behavioral activation"
- Must differentiate from symptoms of mania/ hypomania
- Suicidality

Birmaher B, Brent D; AACAP Work Group on Quality Issues, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 2007;46(11):1503-1526.

Antidepressants: SNRIs

- venlafaxine (Effexor®, Effexor XR®)
- desvenlafaxine (Pristiq®)
- duloxetine (Cymbalta®)
- Mechanism of Action: ↑ serotonin and norepinephrine levels
- S/E:
  - significant withdrawal phenomenon
  - hypertension
  - suicidality

Antidepressants: Others

- **bupropion (Wellbutrin®, Wellbutrin SR®, Wellbutrin XL®)**
  - Increases dopamine and norepinephrine
  - S/E: rash, ↓ seizure threshold, suicidality
- **mirtazapine (Remeron®)**
  - Increases norepinephrine and serotonin
  - S/E: weight gain, sedation, suicidality
- **trazodone (Desyrel®)**
  - S/E: sedation, priapism, suicidality

Pediatric MDD Continuation Phase Treatment

- Given high rate of relapse (40-60%), continue treatment 6-12 months in all patients
- Continue medication
- Continue psychotherapy
  - Consolidate skills learned
  - Address intrapsychic, contextual factors, and environmental stressors that may contribute to relapse

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

Pediatric MDD Maintenance Phase Treatment

- After 6-12 months symptom free, consider maintenance vs. discontinuation of treatment
- Favoring maintenance:
  - 2 or 3 episodes (maintain 1-3 years)
  - 2 episodes with psychosis, severe suicidality, treatment resistance (maintain longer)
  - More than 3 episodes (maintain longer)
- When discontinuing medication, taper slowly

Birmaher B, Brent D, et al. Practice Parameters for the Assessment and Treatment of Children and Adolescents with Depressive Disorders. JAACAP. 1998;37(10 Supplement):63S-83S.

The Black Box Warning in Pediatric Populations

- Antidepressants (can) increase risk of suicidality
- Must balance risks and benefits in prescribing
- Monitoring
  - Physician
  - Family and patient
- Dispense smaller quantities
- Clarify off-label use of medication

Bipolar Disorders (BD) in Children and Adolescents

- The Controversy about Juvenile Bipolar
- Epidemiology
- Differences in Clinical Presentation
- Treatment Arsenal
  - Pharmacotherapy
  - Psychotherapy

Why All The Controversy?

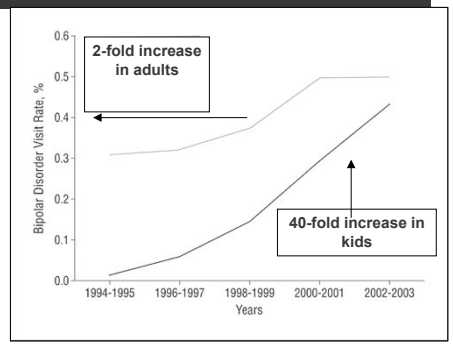
Greves, EH. Acute Mania in a Child of Five Years; Recovery; Remarks. The Lancet. 1884;2:824-6.

The Lancet | Nov. 8, 1884

Acute Mania in a Child of Five Years; Recovery; Remarks.

Why All The Controversy?

Moreno C, et al. National Trends in the Outpatient Diagnosis and Treatment of Bipolar Disorder in Youth Arch Gen Psychiatry. 2007;64(9):1032-1039



DSM-IV-TR Mood Episodes: Major Depressive Episode (MDE)

- Depressed mood or loss of interest/pleasure in life activities + 4 of:
  - Weight change
  - Sleep disturbance
  - Psychomotor change
  - Fatigue/low energy
  - Worthlessness/guilt
  - Poor concentration
  - Thoughts of death/dying/suicide
- 2+ weeks

Adapted from: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000. http://www.behavenet.com/capsules/disorders/mjrdepep.htm.

DSM-IV-TR Mood Episodes: Manic Episode

- 7+ days of abnormally/persistently elevated, expansive, or irritable mood (less if requires hosp)
- 3+ of the following (4+ if irritable)
  - inflated self-esteem or grandiosity
  - decreased need for sleep
  - more talkative / pressured speech
  - flight of ideas / racing thoughts
  - distractibility
  - increase in goal-directed activity or psychomotor agitation
  - excessive involvement in pleasurable activities that have a high potential for painful consequences
- Marked impairment in functioning, requires hospitalization, or associated with psychosis

Adapted from: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000. http://www.behavenet.com/capsules/disorders/manicep.htm.

DSM-IV-TR Mood Episodes: Hypomanic Episode

- 4-6 days of elevated, expansive, or irritable mood
- 3+ of the following (4+ if irritable)
  - inflated self-esteem or grandiosity
  - decreased need for sleep
  - more talkative / pressured speech
  - flight of ideas / racing thoughts
  - distractibility
  - increase in goal-directed activity or psychomotor agitation
  - excessive involvement in pleasurable activities that have a high potential for painful consequences
- Change in functioning but NOT severe impairment, hospitalization, or psychosis

Adapted from: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000. http://www.behavenet.com/capsules/disorders/hypomanicep.htm.

DSM-IV-TR Mood Episodes: Mixed Episode

- Criteria for BOTH a manic episode AND a major depressive episode nearly every day for 7+ days
- Marked impairment, hospitalization, or psychosis

Adapted from: Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000. http://www.behavenet.com/capsules/disorders/mjrdepep.htm.

DSM-IV-TR Bipolar Disorders: Bipolar I vs. Bipolar II vs. Bipolar NOS

- Bipolar I Disorder
  - At least one Manic or Mixed Episode
  - +/- MDE or depressive symptoms
- Bipolar II Disorder
  - At least one MDE + hypomanic episode
- Bipolar Disorder NOS
  - Mood symptoms but not meeting criteria for I or II

•Hirschfeld RMA, Bowden CL, Gitlin MJ, et al. Practice Guideline for the Treatment of Patients with Bipolar Disorder, 2nd Edition. Arlington, VA: American Psychiatric Association, 2002.
•Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000.

Cycling Patterns

- Rapid Cycling: 4+ episodes per year
- Ultrarapid Cycling: cycling hours-days
- Ultradian Cycling: cycling minutes-hours

•Hirschfeld RMA, Bowden CL, Gitlin MJ, et al. Practice Guideline for the Treatment of Patients with Bipolar Disorder, 2nd Edition. Arlington, VA: American Psychiatric Association, 2002.
•Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR). American Psychiatric Association. 2000.
•McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
The Controversy About Juvenile Bipolar

- Does it exist?
- If it does…is it continuous with adult bipolar?
- If it does…what symptom course?

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

Bipolar Adults Report Early Symptom Onset

- Lifetime Prevalence of BP I & II: ~1%-3.9%
- Median Age of Onset: 21 years
- 50%-60% of adults with BD report initial onset of depression or mania was in childhood/ adolescence

•Hirschfeld RMA, Bowden CL, Gitlin MJ, et al. Practice Guideline for the Treatment of Patients with Bipolar Disorder, 2nd Edition. Arlington, VA: American Psychiatric Association, 2002.
•Hirschfeld RMA. Guideline Watch: Practice Guideline for the Treatment of Patients with Bipolar Disorder, 2nd Edition. Arlington, VA: American Psychiatric Association, 2005.
•Lish JD, Dime-Meenan S, Whybrow PC, et al. The National Depressive and Manic-Depressive Association (DMDA) survey of bipolar members. *J Affect Disord*. 1994;31:281-294.
•Chengappa KN, Kupfer DJ, Frank E, et al. Relationship of birth cohort and early age at onset of illness in a bipolar disorder case registry. *Am J Psychiatry*. 2003;160:1636-1642.
•Axelson D, Birmaher B, Strober M, et al. Phenomenology of children and adolescents with bipolar spectrum disorders. *Arch Gen Psychiatry*. 2006;63(10):1139-48.

BD in Kids
Epidemiology and Impact of Illness

- Prevalence:
  - ~1% in general population
  - ~7% of children seen at psychiatric facilities
- Males > females (particularly < 13 yoa)
- ? 1/3 of those with “depression” may be experiencing early-onset bipolar disorder

•McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.
•Childhood Bipolar Disorder. Great Neck, NY: NARSAD: The Mental Health Research Association, 2007. Available at: http://www.narsad.org/dc/childhood_disorders/depression.html. Accessed May 20, 2007.

BD in Kids - Geller Group

- Longitudinal Study of kids w/DSM-III MDD
  - 72 kids avg 10.3 yoa w/MDD followed 10 years
  - compared to 28 normal controls
  - Excluded: bipolar, ADHD, PDD, schizophrenia

Geller B, Zimmerman B, Williams M, et al. Bipolar Disorder at Prospective Follow-up of Adults who had Prepubertal Major Depressive Disorder. Am J Psychiatry. 2001;158:125-7.

BD in Kids – Chronic Mania

- Eight-year prospective follow-up study
- 115 kids ~11 yoa w/BP-I
  - Needed 2+ weeks w/mania or mixed episode
  - Needed either elation or grandiosity
- Seen in f/u over 8 years
  - 60.2% of time in a mood episode (mixed > others)
  - 73.3% of those with mania remitted and relapsed
  - Ultradian cycling

Geller B, Tillman R, Bolhofner K, and Zimerman B. Child Bipolar I Disorder: Prospective Continuity with Adult Bipolar I Disorder; Characteristics of Second and Third Episodes; Predictors of 8-year outcome. *Arch Gen Psychiatry*. 2008;65(10):1125-1133.

BD in Kids – COBY Group

Course and Outcome of Bipolar Youth Study (COBY)

- 438 youth aged 7-17 years w/BD (avg. 12.7 yoa)
  - Bipolar I: 255 Bipolar II: 30 Bipolar NOS: 153
- Why Bipolar Disorder NOS?
  - Most met I criteria except for symptom duration
- Family History (1st Degree Relative) in All Subtypes
  - 28-42% mania/hypomania
  - 72-85% depressive disorder
  - 47-61% anxiety disorder
  - 25-46% substance use disorder

Axelson D, Birmaher B, Strober M, et al. Phenomenology of children and adolescents with bipolar spectrum disorders. *Arch Gen Psychiatry*. 2006;63(10):1139-48.

COBY Group - Lifetime Symptoms

	BP-I (n=255)	BP-II (n=30)	BP-NOS (n=153)
Psychosis	34.5%	20.0%	17.6%
Suicidal Ideation	76.8	93.3	71.9
Suicide Attempt	35.0	46.3	20.9
Psychiatric Hospitalization	66.1	53.3	28.8
Medication Treatment	96.5	93.3	87.6

Axelson D, Birmaher B, Strober M, et al. Phenomenology of children and adolescents with bipolar spectrum disorders. *Arch Gen Psychiatry*. 2006;63(10):1139-48.

COBY Group – Lifetime Comorbid Conditions

	BP-I (n=255)	BP-II (n=30)	BP-NOS (n=153)	TADS/ MDD (n=439)
Any Anxiety Disorder	37.3%	60.0%	37.9%	37.7%
ADHD	**60.4**	**43.3**	**62.1**	**24.6**
ODD	**40.8**	**23.3**	**40.5**	**17.5**
Conduct Disorder	**13.3**	**13.3**	**11.8**	**0.7**
Substance Use Disorder	9.8	6.7	8.5	6.6

•Axelson D, Birmaher B, Strober M, et al. Phenomenology of children and adolescents with bipolar spectrum disorders. *Arch Gen Psychiatry*. 2006;63(10):1139-48.
•Treatment for Adolescents with Depression Study (TADS) Team. The Treatment for Adolescents With Depression Study (TADS): demographic and clinical characteristics. *J Am Acad Child Adolesc Psychiatry*. 2005 Jan;44(1):28-40.

COBY Group - Key Manic Symptoms

- Elated or Expansive Mood
- Decreased Need for Sleep
- Flight of Ideas
- Poor Judgment

Axelson D, Birmaher B, Strober M, et al. Phenomenology of children and adolescents with bipolar spectrum disorders. *Arch Gen Psychiatry*. 2006;63(10):1139-48.

Group Three – Others…

Treatment Options

- Somatic
  - Mood Stabilizers
  - Antipsychotics
  - Antidepressants/Stimulants
  - ECT
- Psychotherapeutic

Mood Stabilizers

Good Evidence	Some Evidence	Less Evidence
●Lithium ●Valproate	●Carbamazepine ●Lamotrigine ●Topiramate	●Oxcarbazepine ●Gabapentin

Antipsychotics

Good Evidence	Less Evidence
●Olanzapine ●Risperidone ●Aripiprazole ●Quetiapine	●Clozapine ●Ziprasidone ●Paliperidone ●Iloperidone ●Asenapine

- Essential for treatment of psychosis
- Open question: ? adjunct vs. monotherapy

Pharmacotherapy Summary

- Monotherapy adequate for some
- Polypharmacy required for many
- Antipsychotics essential for treating psychosis
- Antidepressants and psychostimulants are OK if used adjunctively with a mood stabilizing agent

BD in Kids
Psychosocial Interventions

- Family-focused therapy
- Child- and family-focused CBT
  - Psychoeducation
  - Affect regulation
  - Interpersonal functioning strategies

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Psychoeducation

- Educate patient and family regarding:
  - Symptoms/course of illness
  - Treatment options
  - Impact of illness on functioning
  - Heritability

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Relapse Prevention

- Emphasize impact of medication non-adherence
- Precipitants to relapse (sleep problems, substance use, etc.)
- Stress reduction techniques

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Individual Psychotherapy

- Support psychological development
- Emphasize skill building
- Provide close monitoring of symptoms
- DBT may be helpful for mood and behavioral dysregulation

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Social / Family Functioning

- Enhance family/social relationships
- Improve communication and problem-solving skills

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Academic Functioning

- School consultation; IEP
- Possible day treatment or partial hospitalization program
- Vocational training
- Occupational support

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

BD in Kids
Community Consultation

- Community programs
- Juvenile justice system
- Social welfare programs
- Community-based support / advocacy services
- Foster placement; residential treatment

McClellan J, Kowatch R, Findling RL, et al. Practice Parameter for the Assessment and Treatment of Children and Adolescents with Bipolar Disorder. JAACAP. 2007;46(1):107-125.

Conclusions

- Pediatric anxiety, depressive, and bipolar disorders come in many forms
- All three illnesses can be associated with significant morbidity and mortality
- Anxiety, depression, and bipolar are treatable with medication and psychotherapy