

# Introduction to Child & Adolescent Psychiatry



Psychiatry Clerkship Lecture

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# Goals

- To provide a broad introduction to the field of Child & Adolescent Psychiatry, including some of the differences in working with children and adolescents.

# Disorders of Childhood & Adolescence

- ALL OF THEM!

# Disorders of Childhood & Adolescence



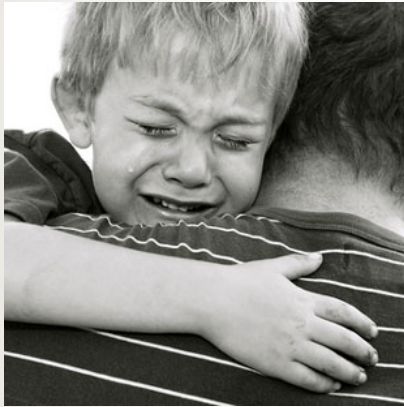
Separation Anxiety Disorder



Social Anxiety Disorder

Generalized Anxiety Disorder

# Disorders of Childhood & Adolescence



# Disorders of Childhood & Adolescence

- Prodrome
  - An early symptom (or set of symptoms) that might indicate the start of a disease before specific symptoms occur
  - May be non-specific symptoms or, in a few instances, may clearly indicate a particular disease

# Disorders of Childhood & Adolescence

- “Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence”
  - Mental Retardation (aka Intellectual Disabilities)
  - Learning Disorders
  - Motor Skills Disorders
  - Communication Disorders
  - Pervasive Development Disorders

# Disorders of Childhood & Adolescence (cont'd)

- “Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence”
  - Attention-Deficit and Disruptive Behaviour Disorders
  - Feeding and Eating Disorders of Infancy or Early Childhood
  - Tic Disorders
  - Elimination Disorders



# Disorders of Childhood & Adolescence (cont'd)

- “Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence” (cont'd)
  - Other Disorders of Infancy, Childhood, or Adolescence
    - Separation Anxiety Disorder
    - Selective Mutism
    - Reactive Attachment Disorder of Infancy or Early Childhood

# Pervasive Developmental Disorders

- Autistic Disorder
- Rett's Disorder
- Childhood Disintegrative Disorder
- Asperger's Disorder
- Pervasive Developmental Disorder, Not Otherwise Specified (NOS)

# Pervasive Developmental Disorders:

## *Autistic Disorder*

- Qualitative impairment in social interaction
- Qualitative impairments in communication
- Restricted repetitive and stereotyped patterns of behaviour, interests, and activities



# Pervasive Developmental Disorders:

## *Asperger's Disorder*

- Qualitative impairment in social interaction
- Qualitative impairments in communication
- No clinically significant general delay in language (e.g., single words used by age 2 years, communicative phrases used by age 3 years)
- Restricted repetitive and stereotyped patterns of behaviour, interests, and activities

# Attention-Deficit and Disruptive Behavior Disorders

- Attention-Deficit/Hyperactivity Disorder
- Conduct Disorder
- Oppositional Defiant Disorder
- Disruptive Behaviour Disorder, Not Otherwise Specified (NOS)

# AD & DBD

## *Attention-Deficit/Hyperactivity Disorder*

- Symptoms (outlined below) causing impairment before age 7
- Inattention (6+)
  - Fails to give close attention to details & makes careless mistakes
  - Has difficulty sustaining attention
  - Often does not seem to listen
  - Does not follow through on directions
  - Has difficulty organizing tasks / activities
  - Avoids tasks that require sustained mental effort
  - Often loses things
  - Is easily distracted by extraneous stimuli
  - Is forgetful in daily activities

# AD & DBD

## *Attention-Deficit/Hyperactivity Disorder*

- Hyperactivity-Impulsivity (6+)
  - Fidgets with hands or feet or squirms
  - Leaves seat in classroom or in other situations
  - Runs about or climbs excessively
  - Has difficulty playing or engaging in leisure activities quietly
  - Is often “on the go” or acts as if “driven by a motor”
  - Talks excessively
  - Blurts out answers before questions are completed
  - Has difficulty awaiting turn
  - Interrupts or intrudes on others
- Impairment from symptoms present in 2+ settings

# AD & DBD

## *Conduct Disorder*

- Aggression to people and animals
  - E.g., bullying, intimidating, physical cruelty
- Destruction of property
  - E.g., deliberate engagement in fire setting
- Deceitfulness or theft
  - E.g., breaking into houses/cars/etc., stealing nontrivial things
- Serious violations of rules
  - E.g., staying out late, running away



# AD & DBD

## *Oppositional Defiant Disorder*

- A pattern of negativistic, hostile, and defiant behaviour
  - Loses temper
  - Argues with adults
  - Actively defies or refuses to comply with adults' requests or rules
  - Deliberately annoys people
  - Blames others for his or her mistakes or misbehaviour
  - Is touchy or easily annoyed by others
  - Is angry and resentful
  - Is spiteful and vindictive

# Tic Disorders

- Tourette's Disorder
- Chronic Motor or Vocal Tic Disorder
- Transient Tic Disorder
- Tic Disorder, Not Otherwise Specified (NOS)

# Tic Disorders

## *Tourette's Disorder*

- Both multiple motor and one or more vocal tics present at some time during illness (not necessarily concurrently)
- Tics occur many times a day nearly every day for >1 year
- Onset before age 18 years

# Other Disorders of Infancy, Childhood, or Adolescence

- Separation Anxiety Disorder
- Selective Mutism
- Reactive Attachment Disorder of Infancy or Early Childhood

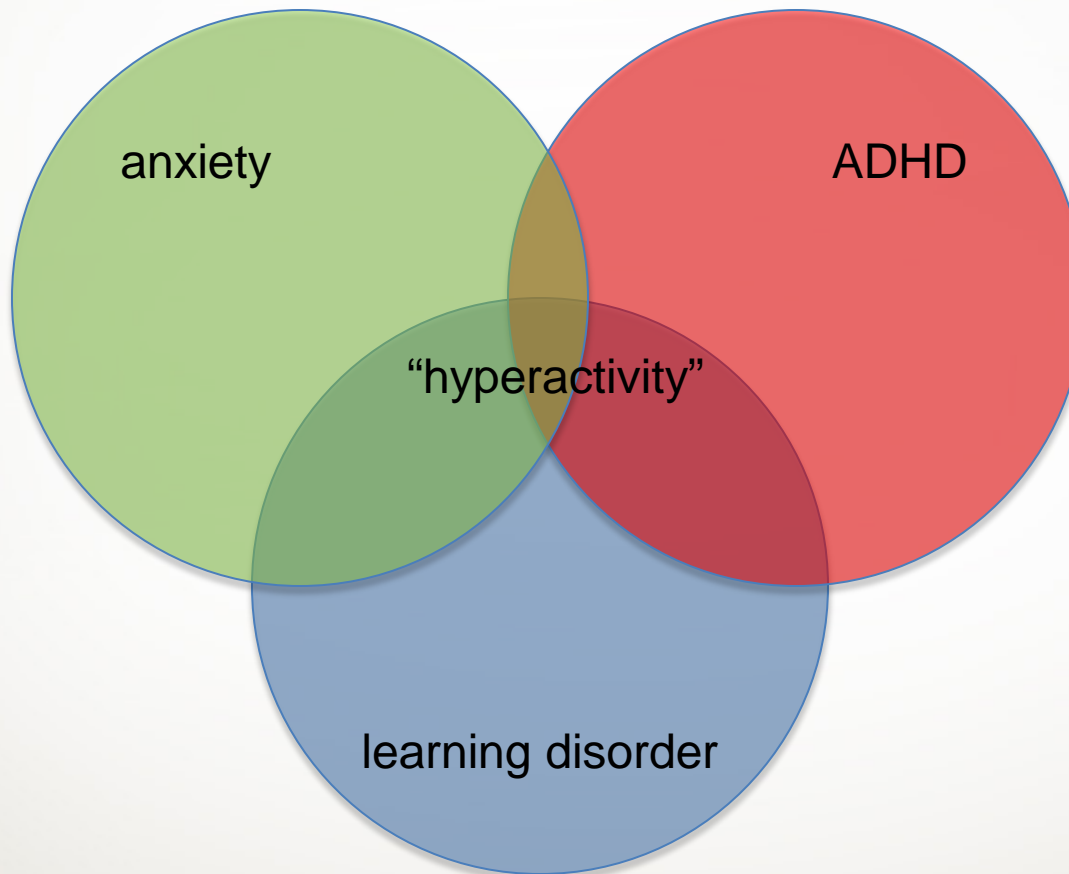
# Separation Anxiety Disorder

- Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached
  - Recurrent distress when separation occurs or is anticipated
  - Excessive worry about losing or harm befalling major attachment figures
  - Excessive worry that untoward event will lead to separation (e.g., kidnapping)
  - Persistent reluctance/refusal to go to school or elsewhere
  - Excessively fearful/reluctant to be alone
  - Reluctance/refusal to go to sleep alone
  - Repeated nightmares re: separation
  - Somatic complaints when separation occurs or is anticipated

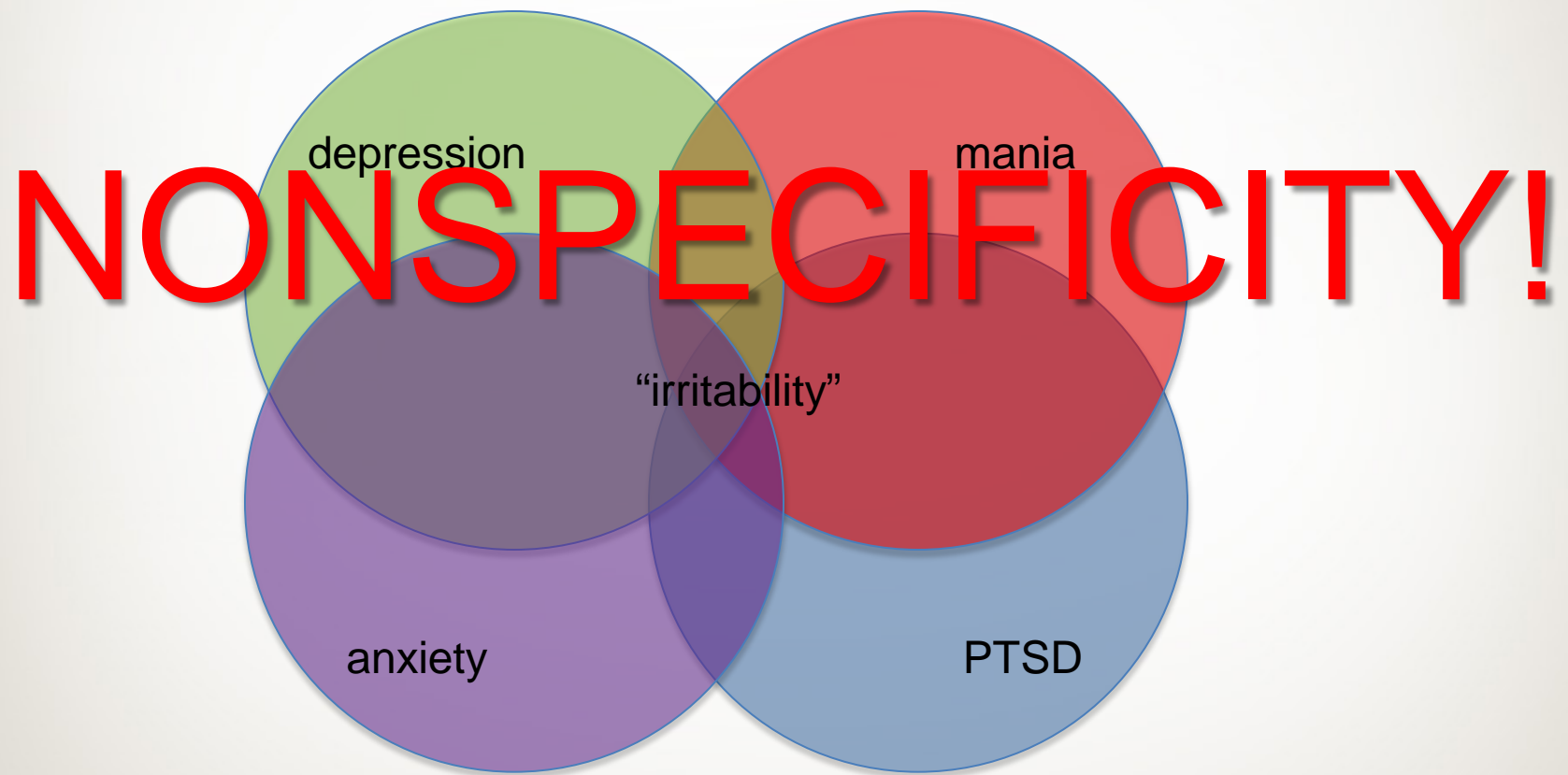
# Reactive Attachment Disorder

- Markedly disturbed and developmentally inappropriate social relatedness in most contexts, beginning before age 5 years
  - Persistent failure to initiate or respond in a developmentally appropriate fashion to most social interactions
    - Excessively inhibited, hypervigilant, or highly ambivalent and contradictory responses
  - Diffuse attachments as manifest by indiscriminate sociability with marked inability to exhibit appropriate selective attachments
- Pathogenic care
  - Persistent disregard of child's basic emotional needs for comfort, stimulation, and affection
  - Persistent disregard of child's basic physical needs
  - Repeated changes of primary caregiver that prevent formation of stable attachments

# Diagnostic Challenges in Child & Adolescent Psychiatry



# Diagnostic Challenges in Child & Adolescent Psychiatry





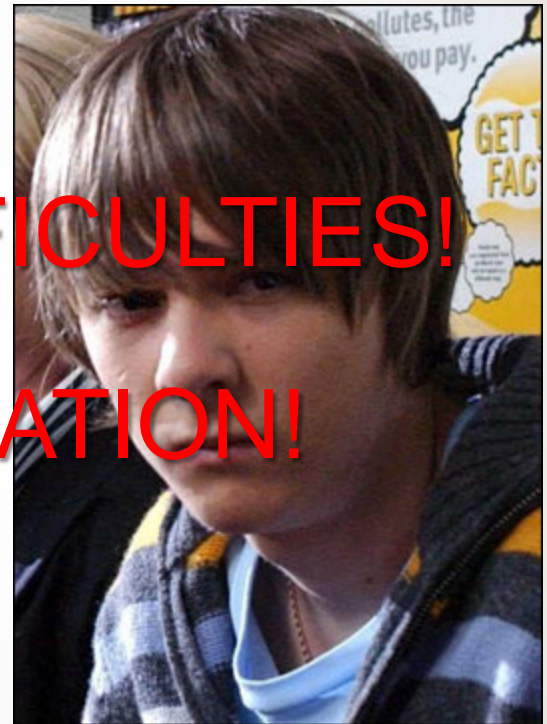
# Diagnostic Challenges in Child & Adolescent Psychiatry

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# Diagnostic Challenges in Child & Adolescent Psychiatry



COMMUNICATION DIFFICULTIES!  
LACK OF COOPERATION!

# Importance of Assessment

- What are we treating?



# Importance of Assessment

- How is the assessment different in kids?
  - Biopsychosocial formulation
  - Developmental context
  - Multiple data sources
    - Reliability of historian(s)
  - Relationship with patient
  - Interview style



# Resources for Assessment Tools

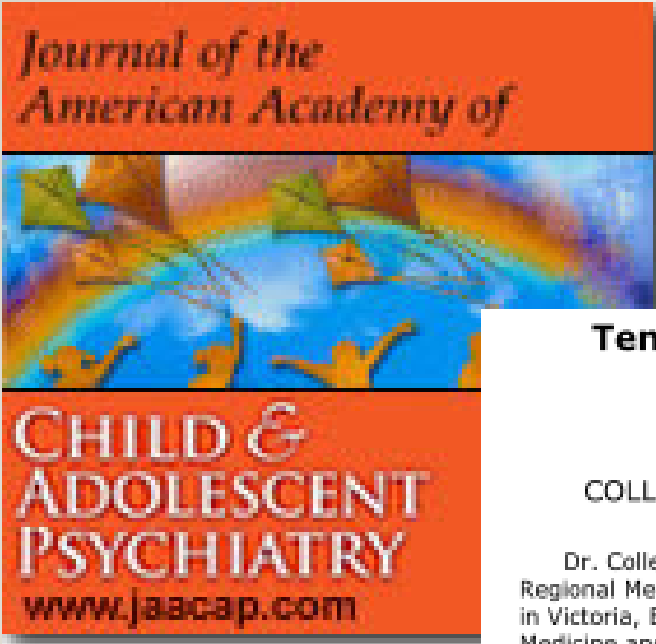
- MGH School Psychiatry Website  
[www2.massgeneral.org/schoolpsychiatry/screeningtools\\_table.asp](http://www2.massgeneral.org/schoolpsychiatry/screeningtools_table.asp)
- JAACAP review articles
  - Overview of scale functioning, psychometric properties, & selection
  - Scales for internalizing disorders
  - Scales assessing suicidality, cognitive style, & self-esteem
  - Scales assessing trauma & its effects
  - Scales assessing ADHD
  - Scales assessing externalizing behaviors
  - Scales assessing functional impairment



## Attention Deficit/Hyperactivity Symptoms

| Screening Tool / Rating Scale  | For Ages (Years) | Who Completes Checklist: Number of Items         | Time to Complete (Minutes) | View Free Online? |
|--|------------------|--|----------------------------|-------------------|
| Attention Deficit Disorders Evaluation Scale (ADDES-3) <a href="#">DETAIL</a>            | 4-18             | Parent: 46<br>Teacher: 60                        | 12<br>15                   |                   |
| ADHD Rating Scale-IV (ADHD-IV) <a href="#">DETAIL</a>                                    | 5-17             | Parent,<br>Teacher,<br>Clinician: 18             | 10-20                      |                   |
| ADHD Rating Scale <a href="#">DETAIL</a>   | 6-12             | Parent,<br>Teacher,<br>Clinician,<br>Student: 18 | 10-15                      | YES               |
| Vanderbilt ADHD Diagnostic Parent Rating Scale <a href="#">DETAIL</a>                    | 6-12             | Parent: 55                                       | 10                         | YES               |
| Vanderbilt ADHD Diagnostic Teacher Rating Scale <a href="#">DETAIL</a>                   |                  | Teacher: 43                                      |                            |                   |
| SNAP-IV Rating Scale - Revised (SNAP-IV-R) <a href="#">DETAIL</a>                        | 6-18             | Parent,<br>Teacher: 90                           | 10                         |                   |
| ADD-H: Comprehensive Teacher's Rating Scale: Parent Form (ACTeRS) <a href="#">DETAIL</a> | 6-14             | Parent: 24                                       | 5-10                       |                   |
| ADHD Comprehensive Teacher Rating Scale (ACTeRS) <a href="#">DETAIL</a>                  | 6-14             | Teacher: 24                                      | 5-10                       |                   |





## Ten-Year Review of Rating Scales. V: Scales Assessing Attention-Deficit/Hyperactivity Disorder

[RESEARCH UPDATE REVIEW]

COLLETT, BRENT R. PH.D.; OHAN, JENEVA L. PH.D.; MYERS, KATHLEEN M. M.D., M.P.H.

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Accepted April 4, 2003.

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### ABSTRACT

**Objective:** This article summarizes information on scales assessing attention-deficit/hyperactivity disorder (ADHD) in children and adolescents.

**Method:** The authors sampled articles on ADHD over the past decade. Several popular older ADHD measures have recently been revised, and new ADHD scales have been developed. The authors selected primarily ADHD scales based on the *DSM-IV* construct of ADHD that also have multiple literature citations. They then reviewed their psychometric properties. Those with adequate psychometric functioning plus considerable literature citations, known wide usage in clinical practice, or a current niche are presented here.

**Results:** Several rating scales consistent with the *DSM-IV* conceptualization of ADHD are now available for use in both home and school settings. Many of the instruments demonstrate solid psychometric properties and a strong normative base. However, some popular scales have not been adequately investigated. Some measures are restricted to the comprehensive assessment of ADHD, whereas others also include symptoms of other disorders. The potential applications for these scales with youths diagnosed with ADHD are broad.

# Assessment

## Example: Anxiety Disorders

### STRUCTURED INTERVIEWS

*Typically used in research assessments*

- ✓ KSADS-PL
- ✓ CHIPS
- ✓ Anxiety Disorders Interview Schedule (ADIS)

### SELF-RATING SCALES

- ✓ MASC - *copyrighted*
- ✓ SCARED - *8 years and up*
- ✓ Achenbach Child Behavior Checklist (CBCL) - *older & younger versions*

### CLINICIAN RATED SCALES

- ✓ Hamilton Anxiety Rating Scale (HAM-A)
- ✓ Pediatric Anxiety Rating Scale (PARS)
- ✓ Yale-Brown Obsessive Compulsive Scale (Y-BOCS)



# Teacher Reports

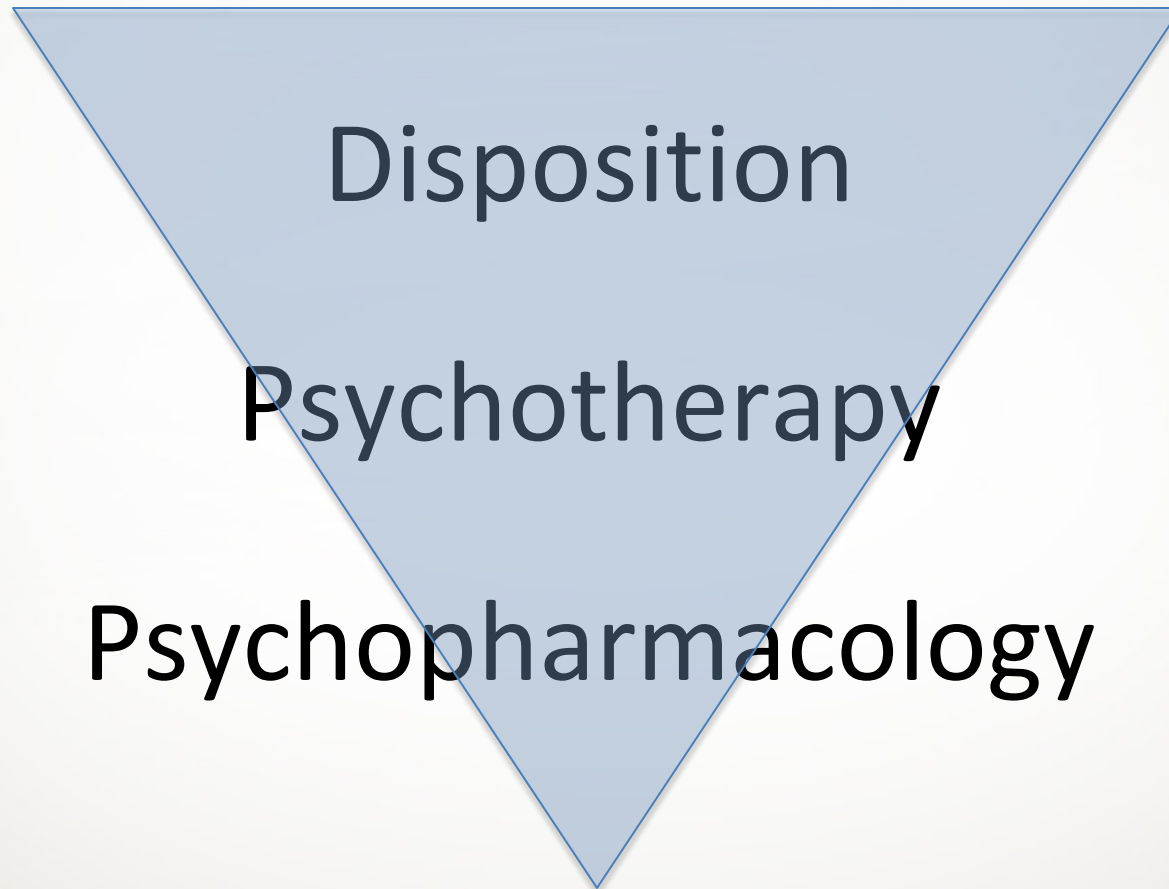
- ADHD
  - Conners
  - SNAP-IV
  - ADHD Rating Scale
  - Vanderbilt ADHD Rating Scale
- Achenbach Teacher Report Form (Child Behavior Check List)
- Children's Depression Index (CDI)



# Principles of Treatment

- How is treatment different in kids?
  - Multi-disciplinary, team-oriented approach
  - Family & school involvement
  - NOT JUST MEDS!
  - Developmental perspective /context
  - Importance of milieu
  - Informed consent / assent
  - Compliance

# Treatment of Mental Illness in Children



# Disposition

- **Levels of Mental Health Care**
  - **Outpatient Treatment**  
individual, group, or family therapy, and/or medication management
  - **Intensive Outpatient Treatment**  
either in a program or home-based
  - **Partial Hospitalization**
  - **Inpatient Hospitalization**
  - **Residential Treatment**
  - **OTHER:** (*Juvenile Detention, Wilderness Programs, etc.*)

# Case #1

A 14-year old girl with no past history cut her arm yesterday with a paperclip at school because her best friend was doing it. Her parents are worried about her because she has been looking sad and is isolating in her room; they want her to “get help”. She is not suicidal or aggressive and is not using any drugs or alcohol.

# Case #2

An 11-year old boy has been “acting strange” and talking to himself for the past few weeks. His teacher found a piece of paper in his desk that talks about his having special powers, wanting to kill his classmate (“the devil”), and wishing he were dead himself. When she called his mother, she learned that he made a noose out of rope last week and that his older brother, uncle, and grandmother all had “manic depression” and his uncle had committed suicide.

# Case #3

A 15-year old girl has been smoking weed daily, skipping school, and fighting with her parents more over the past few months. Today she hit her mother when she got grounded, then yelled “I would rather be dead than stay here with you”. Now she is calm and apologetic to her mom, who is tearful but feels safe with her at home for tonight and just wants some help with these behaviors.

# Disposition (cont'd)

- Types of DCS Out-of-home Placement
  - Family foster care
  - Kinship care
  - Treatment foster care
  - Residential/group care
    - Community-based group homes
    - Residential treatment facilities
    - Secure facilities
  - Emergency care
  - Shared family care
  - APPLA and LTFC
    - APPLA = Another Planned Permanent Living Arrangement,
    - LTFC = Long-Term Foster Care (no longer used after Adoption and Safe Families Act of 1997)



# Psychotherapy

## Evidence-Based Therapies:

Family therapy

Cognitive-behavioral therapy

Psychodynamic therapy

Play therapy

Interpersonal therapy

Dialectical behavioral therapy



## FACTS for FAMILIES

No. 86

(Updated May 2008)

### PSYCHOTHERAPIES FOR CHILDREN AND ADOLESCENTS

Psychotherapy is a form of psychiatric treatment that involves therapeutic conversations and interactions between a therapist and a child or family. It can help children and families understand and resolve problems, modify behavior, and make positive changes in their lives. There are several types of psychotherapy that involve different approaches, techniques and interventions. At times, a combination of different psychotherapy approaches may be helpful. In some cases a combination of medication with psychotherapy may be more effective.

Different types of psychotherapy: (alphabetical order)

- **Cognitive Behavior Therapy (CBT)** helps improve a child's mood, anxiety and behavior by examining confused or distorted patterns of thinking. CBT therapists teach children that thoughts cause feelings and moods which can influence behavior. During CBT, a child learns to identify harmful thought patterns. The therapist then helps the child replace this thinking with thoughts that result in more appropriate feelings and behaviors. Research shows that CBT can be effective in treating a variety of conditions, including depression and anxiety.
- **Dialectical Behavior Therapy (DBT)** can be used to treat adolescents who have chronic suicidal thoughts, engage in intentionally self-harmful behaviors or have Borderline Personality Disorder. DBT emphasizes taking responsibility for one's problems and helps the person examine how they deal with conflict and intense negative emotion. This often involves a combination of group and individual sessions.
- **Family Therapy** focuses on helping the family function in more positive and constructive ways by exploring patterns of communication and providing support and education. Family therapy sessions can include the child or adolescent along with parents, siblings, and grandparents. *Couples therapy* is a specific type of family therapy that focuses on a couple's communication and interactions (e.g. parents having marital problems).
- **Group Therapy** is a form of psychotherapy where there are multiple patients led by one or more therapists. It uses the power of group dynamics and peer interactions to increase understanding of mental illness and/or improve social skills. There are many different types of group therapy (e.g. psychodynamic, social skills, substance abuse, multi-family, parent support, etc.).
- **Interpersonal Therapy (IPT)** is a brief treatment specifically developed and tested for depression, but also used to treat a variety of other clinical conditions. IPT therapists focus on how interpersonal events affect an individual's emotional state. Individual difficulties are framed in interpersonal terms, and then problematic relationships are addressed.
- **Play Therapy** involves the use of toys, blocks, dolls, puppets, drawings and games to help the child recognize, identify, and verbalize feelings. The psychotherapist observes how the child uses play materials and identifies themes or patterns to understand the child's problems. Through a combination of talk and play the child has an opportunity to better understand and manage their conflicts, feelings, and behavior.

#### Psychotherapies for Children and Adolescents, "Facts for Families," No. 86 (5/08)

- **Psychodynamic Psychotherapy** emphasizes understanding the issues that motivate and influence a child's behavior, thoughts, and feelings. It can help identify a child's typical behavior patterns, defenses, and responses to inner conflicts and struggles. *Psychoanalysis* is a specialized, more intensive form of psychodynamic psychotherapy which usually involves several sessions per week. Psychodynamic psychotherapies are based on the assumption that a child's behavior and feelings will improve once the inner struggles are brought to light.

Psychotherapy is not a quick fix or an easy answer. It is a complex and rich process that – over time – can reduce symptoms, provide insight, and improve a child or adolescent's functioning and quality of life.

At times, a combination of different psychotherapy approaches may be helpful. In some cases a combination of medication with psychotherapy may be more effective. Child and adolescent psychiatrists are trained in different forms of psychotherapy and, if indicated, are able to combine these forms of treatment with medications to alleviate the child or adolescent's emotional and/or behavioral problems.

In order to locate a child psychiatrist near you, child and adolescent psychiatrists can be found through local medical and psychiatric societies, local mental health associations, local hospitals or medical centers, departments of psychiatry in medical schools, and national organizations like the American Academy of Child and Adolescent Psychiatry and the American Psychiatric Association. In addition, pediatricians, family physicians, school counselors, and Employee Assistance Programs (EAP) can be helpful in identifying child and adolescent psychiatrists.

For more information see *Facts for Families*:

- #25 Know Where to Seek Help for Your Child
- #52 Comprehensive Psychiatric Evaluation
- #53 What is Psychotherapy for Children and Adolescents
- #21 Psychiatric Medication for Children
- #60 Definition of a Child and Adolescent Psychiatrist

#### \*\*\*

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You may also mail in your contribution. Please make checks payable to the AACAP and send to **Campaign for America's Kids**, P.O. Box 96106, Washington, DC 20090.

The American Academy of Child and Adolescent Psychiatry (AACAP) represents over 5,000 child and adolescent psychiatrists who are physicians with at least five years of additional training beyond medical school in general (adult) and child and adolescent psychiatry.

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# Pediatric Psychopharmacology:

## *Ten General Principles*

- 1) Make as thorough and accurate a diagnosis as possible before starting medication

*including evaluation of symptoms, past medical and psychiatric history, family history, physical exam, and often labs and other studies such as an EKG, EEG, CT scan, or MRI*



# Pediatric Psychopharmacology:

## *Ten General Principles*

- 2) Use medication as part of a comprehensive treatment plan, not alone.



# Pediatric Psychopharmacology:

## *Ten General Principles*

- 3) Use the available data (in children whenever possible, otherwise in adults) to determine which medication would be appropriate.



# Pediatric Psychopharmacology:

## *Ten General Principles*

- 4) Always weigh the risks and benefits of starting a new medication (including side effects and drug-drug interactions).



# Pediatric Psychopharmacology:

## *Ten General Principles*

- 5) Obtain **informed consent** from parent or legal guardian prior to starting medication and, when possible, **assent** from the child.



# Pediatric Psychopharmacology:

## *Ten General Principles*

- 6) Start one medication at time, whenever possible, to identify more accurately the response and side effects as well as to minimize risk of drug-drug interactions.





# Pediatric Psychopharmacology:

## *Ten General Principles*

- 7) Start with a low dose and increase gradually to the desired effect.



# Pediatric Psychopharmacology:

## *Ten General Principles*

8) Monitor carefully for response to and side effects from medication.



# Monitoring Schedule

| CLASS OF MEDICATION           | MEDICATION  | LAB MONITORING  | FREQUENCY        |
|-------------------------------|---|---|------------------|
| <i>Stimulants</i>             | Ritalin, Focalin, Concerta, Metadate, Adderall, Dexedrine | CBC w/ diff   | Yearly           |
| <i>SSRI's</i>                 | Prozac, Zoloft, Celexa, Lexapro, Paxil                    | <i>None</i>   |                  |
| <i>Other anti-depressants</i> | Effexor   | Fasting lipid profile   | Yearly           |
|                               | Remeron, Wellbutrin, Trazodone                            | <i>None</i>   |                  |
| <i>Mood stabilizers</i>       | Lithium   | Lithium level, Chem 7, TSH, CBC w/ diff   | Every six months |
|                               | Depakote  | Depakote level, LFT's, CBC  | Every six months |
|                               |   | Fasting lipid profile   | Yearly           |
|                               | Tegretol  | Tegretol level, CBC, Chem 7, LFTs   | Every six months |
|                               |   | TSH, optho exam   | Yearly           |
|                               | Trileptal   | Chem 7  | Every six months |
|                               | Lamictal  | <i>None</i>   |                  |
|                               | Neurontin   | TSH   | Yearly           |
|                               | Topamax   | Chem 7  | Yearly           |
| <i>Anti-psychotics</i>        | Zyprexa, Risperdal, Seroquel, Abilify, Geodon             | Fasting glucose, fasting lipid profile, CBC, Chem 7, LFT's (also K, Mg for <i>Geodon</i> ) (also optho exam for <i>Seroquel</i> ) | Every six months |
|                               |   | TSH (also EKG for <i>Geodon</i> )   | Yearly           |
| <i>Alpha-agonists</i>         | Clonidine, Tenex  | <i>None</i>   |                  |
| <i>Other</i>                  | Strattera   | LFT's   | Yearly           |

# Pediatric Psychopharmacology:

## *Ten General Principles*

- 9) Involve multi-disciplinary team members (family, school, therapists, youth care workers, pediatricians, etc.) in both evaluation and monitoring.



# Pediatric Psychopharmacology:

## *Ten General Principles*

10) Always consider the biopsychosocial and developmental context of the child.



# BLACK BOX WARNING

## SSRI's

**Black box (10/04):** Anti-depressants “increase the risk of suicidal thinking and behavior in children and adolescents”

Based on review of 23 published and unpublished studies:

- *Rate of spontaneously reported SI 4% in treatment group, 2% in placebo group*
- *Compelling parent testimony*
- *Rate of SI on structured assessment not different (trend for treated kids to have lower rates)*
- *NOT based on completed suicide*

Additional warning in 2006 for adults ages 18-25

**CDC report released in *Pediatrics* in February, 2007: Suicide rate in 2004 in children ages 1 – 19 increased by 18%**

List of drugs receiving a boxed warning, other product labeling changes, and a Medication Guide pertaining to pediatric suicidality.

- 1. Anafranil (clomipramine)
- 2. Asendin (amoxapine)
- 3. Aventyl (nortriptyline)
- 4. Celexa (citalopram hydrobromide)
- 5. Cymbalta (duloxetine)
- 6. Desyrel (trazodone HCl)
- 7. Elavil (amitriptyline)
- 8. Effexor (venlafaxine HCl)
- 9. Etrafon (perphenazine/amitriptyline)
- 10. fluvoxamine maleate
- 11. Lexapro (escitalopram hydrobromide)
- 12. Limbitrol (chlordiazepoxide/amitriptyline)
- 13. Ludiomil (maprotiline)
- 14. Marplan (isocarboxazid)
- 15. Nardil (phenelzine sulfate)
- 16. Norpramin (desipramine HCl)
- 17. Pamelor (nortriptyline)
- 18. Parnate (tranylcypromine sulfate)
- 19. Paxil (paroxetine HCl)
- 20. Pexeva (paroxetine mesylate)
- 21. Prozac (fluoxetine HCl)
- 22. Remeron (mirtazapine)
- 23. Sarafem (fluoxetine HCl)
- 24. Serzone (nefazodone HCl)
- 25. Sinequan (doxepin)
- 26. Surmontil (trimipramine)
- 27. Symbyax (olanzapine/fluoxetine)
- 28. Tofranil (imipramine)
- 29. Tofranil-PM (imipramine pamoate)
- 30. Triavil (perphenazine/amitriptyline)
- 31. Vivactil (protriptyline)
- 32. Wellbutrin (bupropion HCl)
- 33. Zoloft (sertraline HCl)
- 34. Zyban (bupropion HCl)

# PROZAC LABEL

What does a “Black Box Warning” look like?

1

PV 5322 DPP

**PROZAC®**  
**FLUOXETINE CAPSULES, USP**  
**FLUOXETINE ORAL SOLUTION, USP**  
**FLUOXETINE DELAYED-RELEASE CAPSULES, USP**

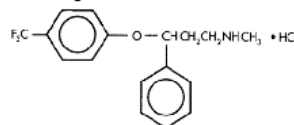
**WARNING**

**Suicidality in Children and Adolescents** — Antidepressants increased the risk of suicidal thinking and behavior (suicidality) in short-term studies in children and adolescents with major depressive disorder (MDD) and other psychiatric disorders. Anyone considering the use of Prozac or any other antidepressant in a child or adolescent must balance this risk with the clinical need. Patients who are started on therapy should be observed closely for clinical worsening, suicidality, or unusual changes in behavior. Families and caregivers should be advised of the need for close observation and communication with the prescriber. Prozac is approved for use in pediatric patients with MDD and obsessive compulsive disorder (OCD). (See WARNINGS and PRECAUTIONS, Pediatric Use.)

Pooled analyses of short-term (4 to 16 weeks) placebo-controlled trials of 9 antidepressant drugs (SSRIs and others) in children and adolescents with major depressive disorder (MDD), obsessive compulsive disorder (OCD), or other psychiatric disorders (a total of 24 trials involving over 4400 patients) have revealed a greater risk of adverse events representing suicidal thinking or behavior (suicidality) during the first few months of treatment in those receiving antidepressants. The average risk of such events in patients receiving antidepressants was 4%, twice the placebo risk of 2%. No suicides occurred in these trials.

**DESCRIPTION**

Prozac® (fluoxetine capsules, USP and fluoxetine oral solution, USP) is a psychotropic drug for oral administration. It is also marketed for the treatment of premenstrual dysphoric disorder (Sarafem®, fluoxetine hydrochloride). It is designated (±)-N-methyl-3-phenyl-3-[(α,α,α-trifluoro-*p*-tolyl)oxy]propylamine hydrochloride and has the empirical formula of C<sub>17</sub>H<sub>18</sub>F<sub>3</sub>NO•HCl. Its molecular weight is 345.79. The structural formula is:



Fluoxetine hydrochloride is a white to off-white crystalline solid with a solubility of 14 mg/mL in water.

Each Pulvule® contains fluoxetine hydrochloride equivalent to 10 mg (32.3 μmol), 20 mg (64.7 μmol), or 40 mg (129.3 μmol) of fluoxetine. The Pulvules also contain starch, gelatin, silicone, titanium dioxide, iron oxide, and other inactive ingredients. The 10- and 20-mg Pulvules also contain FD&C Blue No. 1, and the 40-mg Pulvule also contains FD&C Blue No. 1 and FD&C Yellow No. 6.



# Black Box Warnings

- Anti-Depressants
- Strattera (risk of SI)
- Atypical anti-psychotics (risk of death in patients with dementia-related psychosis)

# FDA Alerts

- Stimulants and cardiac abnormalities
- Anti-epileptics and suicidal ideation

# Psychopharmacological Treatment for Very Young Children

*Gleason et al, JAACAP 46: 12, December 2007*

- Reviews available data and makes recommendations for use of psychotropic meds in children under 6
- Provides treatment algorithms for common disorders based on preschool data, extrapolation from older children, & expert opinion
- ALWAYS recommends thorough evaluation, psychotherapy, and parental treatment when appropriate prior to medication

# TEXTBOOKS

