Objectives

(1) Explain the role of a child/adolescent psychiatrist (CAP) and the importance of early identification of psychiatric illness and intervention in childhood/adolescence.

(2) Explain key developmental considerations that influence diagnosis, behavioral manifestation, and treatment of psychiatric illness in childhood/adolescence.

(3) Explain the role of healthcare providers as mandated reporters for suspicion of child neglect/abuse.

(4) Summarize the key DSM-5 criteria for:
(a) attention-deficit hyperactivity disorder (ADHD)
(b) oppositional defiant disorder (ODD)
(c) conduct disorder (CD)
(d) disruptive mood dysregulation disorder (DMDI)
(e) Tourette syndrome
(f) separation anxiety disorder
(g) autism spectrum disorder (ASD)
(h) gender dysphoria
(i) eating disorders – anorexia nervosa, bulimia nervosa, binge-eating disorder

(5) Explain basic treatment modalities for the above conditions.
Role of Child/Adolescent Psychiatrist

- Diagnosis/treatment of disorders of thinking, feeling and/or behavior
- Comprehensive diagnostic evaluation
- Developmental approach throughout lifecycle
- Flexibility in treatment modalities
- Advocate for children's best interests

National Shortage

- Only about 8,500 child psychiatrists in America, not nearly enough for estimated 15 million kids who need one.
- No individual state meets the AACAP's standard of 47 child psychiatrists for every 100,000 children 17 or younger — or one for every 2,127 kids.
**Pediatric Psychopathology**
- Feeding and eating disorders
- Elimination disorders
- Intellectual and learning disabilities
- Adjustment disorders
- Mood disorders
- Anxiety disorders
- Attention deficit hyperactivity disorder
- Disruptive and impulse control disorders
- Tic disorders
- Substance use disorders
- Sleep disorders

**Evolution of DSM**
- Diagnostic and Statistical Manual of Mental Disorders (APA)
- Classification system based on common language and standard criteria
  - DSM-I (1952)
  - DSM-IV-TR (2000): five-part axial system
  - DSM-5 released May 2013

**Definition of Mental Disorder - DSM-5**

“A syndrome characterized by **clinically significant** disturbance in an individual’s cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning”

- cannot be an expectable or culturally accepted response to stress or loss or socially deviant behavior (that is primarily a conflict between the individual and society)

(American Psychiatric Association, 2013, p. 20)
General Patterns in Human Development

- Development occurs along multiple lines: physical, cognitive, intellectual, and social
- We tend to chart development for each of these lines in terms of milestones:
  - Milestones are simply normative markers at median ages
  - Some children develop slower and some faster
  - The ages of the milestones are approximate

[See Appendix for a review of developmental milestones.]

General Patterns in Human Development

- Although children generally progress along the lines of development together, they often may not.
- Thus, a child may match the milestones for cognitive development but show slower growth in the social area.

Understanding Brain Development
Developmental Trajectory

- Family problems experienced in childhood and adolescence affect brain development and can lead to mental health issues in later life.
- Brain imaging technology used to scan teenagers aged (17-19)
- Those who experienced (mild – moderate) family difficulties from birth to 11 years had developed a smaller cerebellum (associated with skill learning, stress regulation, sensory-motor control)
- A smaller cerebellum may be a risk indicator of psychiatric disease later in life, as it is consistently found to be smaller in virtually all psychiatric illnesses.

February 19, 2014
University of East Anglia

The Doctor
(Sir Luke Fildes)

Background: Prevalence

- 4 million U.S. children & adolescents suffer from a serious mental illness that causes significant functional impairments at home, at school, and with peers.
- Half of all lifetime cases of mental disorders begin by age 14.
- Despite effective treatments, there are long delays, between the first onset of symptoms and when people seek and receive treatment.
- In any given year, only 20% of children with mental disorders are identified and receive mental health services.
- An untreated mental disorder can lead to a more severe, more difficult to treat illness, and to the development of co-occurring mental illnesses.
Consequences, if untreated...

- Suicide – 3rd leading cause of death in youth 15 to 24.
- More teens and young adults die from suicide than from cancer, heart disease, AIDS, birth defects, stroke, pneumonia, influenza, and chronic lung disease combined.
- Over 90% of children and adolescents who die by suicide have a mental illness.
- States spend nearly $1 billion annually on medical costs associated with completed suicides and suicide attempts by youth up to 20 years of age.

Consequences, if untreated...

- **School Failure**: highest dropout rate of any disability group.
- **Juvenile and Criminal Justice Involvement**: 65% of boys and 75% of girls in juvenile detention have at least 1 mental health disorder.
- **Higher Health Care Utilization**: incurrence of higher health care costs than other adults.

Consequences, if untreated...

Childhood adversities and early-onset mental disorders associated with higher rates of chronic physical problems in adulthood.

August 2, 2011
JAMA and Archives Journals
**Children with mental illness become adults with mental illness**

- Children with behavioral problems more at risk of inflammation and chronic health problems (heart disease, obesity, diabetes)
- Children with behavioral problems at the age of 8, had higher levels of two proteins (C-reactive protein – CRP, and Interleukin 6 – IL 6) in their blood when tested at the age of 10.
- Increased levels of CRP and IL-6 can be an early warning sign that a person may be at risk of chronic or inflammatory conditions later in life.

September 5, 2013
Columbia University’s Mailman School of Public Health

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**Early Identification and Intervention**

- Can minimize *long-term disability*
- Can prevent a significant proportion of delinquent and violent youth from future violence and crime
- Can enable success in school and social development
- Can promote *resilience*

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**Resilience**

“...a set of qualities that helps a person to withstand many of the negative effects of adversity...Bearing in mind what has happened to them, a resilient child does better than he or she ought to do.”

Gilligan (2000)
More than 6,000 children are killed by parents or caretakers each year in the US
More than 3 million annually are reported abused, 50% of these are confirmed by investigation
Likely that many abuse cases unreported

Defining abuse:
- Tissue damage
- Neglect
- Sexual exploitation
- Mental cruelty
**Child Abuse**

Mandatory reportable offense up to age 18.

- Failure to do so is criminal offense
- If case is reported in error, the physician is protected from legal liability
- Remember your duty to protect the child (*separate from the parents*), as well as the duty to report

---

**Clinical Signs of Child Abuse**

- Broken bones in first year of life
- Sexually transmitted disease (STD) in young children
- 92% of injuries are soft tissue injuries (bruises, burns, lacerations)
- 5% have no physical signs

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**Clinical Signs of Child Abuse**

- Non-accidental burns have a particularly poor prognosis:
  - They are associated with death or foster home placement
  - If burn is on arms and hands, it was likely an accident
  - If burn is on arms but not hands, it is more likely abuse
- Shaken baby syndrome: look for broken blood vessels in eyes
Children at Risk

Children at risk for abuse are:

• Younger than 4 years
• Special needs populations:
  - intellectual disability (ID) (formerly MR) [See Appendix for review of ID.]
  - learning disabilities
  - other mental illness
  - chronic physical illness

Child Abuse

• Children who are abused are more likely to:
  • Be aggressive in the classroom
  • Perceive others as hostile
  • View aggression as a good way to solve problems
  • Have abnormally high rate of withdrawal (girls)
  • Be unpopular with school peers and other children; the friends they do have tend to be younger

Child Sexual Abuse

• 50% of sexual abuse cases are within the family
• 60% of victims are female
• Most victims are aged 9 to 12 years
• 25% of victims younger than 8 years
• Most likely source: uncles and older siblings, although stepfathers are also more likely. In general, males more likely to be sources.
Child Sexual Abuse

Risk factors:
• Single-parent families
• Marital conflict
• History of physical abuse
• Social isolation

Child Sexual Abuse

• More than 25% of adult women report being sexually abused as a child (defined as sex experience before age 18 with a person 5 years older):
  • 50% by family members
  • 50% told no one

Perpetrators

• Limited understanding of normative development
• History of child maltreatment in parental family of origin
• Substance abuse and/or untreated mental illness
• Low socioeconomic status
• Non-biological, transient caregivers in home
• Social isolation of family
• Community violence
**Increased Morbidity**

- Childhood physical abuse is associated with significantly elevated rates of functional somatic syndromes such as chronic fatigue syndrome, fibromyalgia and multiple chemical sensitivities...

  May 17, 2011
  University of Toronto

**Increased Mortality Risk**

Traumatic childhood experiences are linked to an increased risk of early death.

September 4, 2013
University College London

**Attention-Deficit Hyperactivity Disorder**

- 3 - 5 % of preschool and school-age children
- Childhood onset; often lasts into adulthood
- Disrupts functioning across settings
- Exact causes unknown
- Combination of nature and nurture
- Risk factors: Family history, prenatal risks, environmental toxins, differences in brain structure
Attention-Deficit Hyperactivity Disorder

• Boys > Girls (10:1)

• Symptoms:
  - Inattention
  - Impulsivity
  - Hyperactivity

• Lower dopamine levels

• Treatment:
  - Stimulants: methylphenidate, dextro-amphetamine
  - Non-stimulants: atomoxetine; alpha-2 agonists (e.g., clonidine)

Neuroimaging in ADHD

Common Signs/Symptoms of ADHD

ATTENTION:
• trouble paying attention or listening
• inattention to details, careless mistakes
• losing things (e.g., school supplies)
• forgetting to turn in homework
• trouble finishing assignments
• trouble following multiple adult commands
• difficulty playing quietly
Common Signs/Symptoms of ADHD

**HYPERACTIVITY:**
- fidgeting
- inability to stay seated
- running or climbing excessively
- always "on the go"

**IMPULSIVITY:**
- talks too much
- interrupts or intrudes on others
- blurts out answers
- impatience
- difficult to redirect

**Diagnosis of ADHD**
- Symptom onset: prior to 12 years
- Symptom duration: > 6 months
- 2 or more settings (school, home, work)
- Use of rating scales (Conners, Vanderbilt)
- 3 presentations:
  - Combined
  - Predominantly inattentive
  - Predominantly hyperactive/impulsive
ADHD - Videos


http://www.nytimes.com/interactive/2008/05/21/health/healthguide/TE_ADHD_CLIPS.html

Overlapping Diagnoses

Children have a hard time diagnosing mental illnesses in children, as they often have symptoms that are indicators of multiple disorders. Here are four illnesses that often cause confusion for physicians and parents.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oppositional Defiant Disorder</td>
<td>Often loses temper, argues with others, delinquent, argumentative.</td>
</tr>
<tr>
<td>Conduct Disorder</td>
<td>Often causes poner, trouble with school, often aggressive.</td>
</tr>
<tr>
<td>Bipolar Disorder</td>
<td>Eats food, depression, changes in mood.</td>
</tr>
<tr>
<td>Disruptive Mood Dysregulation Disorder</td>
<td>Mood swings, impulsivity, irritability.</td>
</tr>
</tbody>
</table>

Diagnostic Challenge

- Symptom overlap in:
  - Oppositional Defiant Disorder (ODD)
  - Conduct Disorder (CD)
  - Bipolar Disorder (BD)
  - Disruptive Mood Dysregulation Disorder (DMDD)
ADHD vs. Bipolar Disorder

• Often co-morbid (~40-90% est. prevalence)

• Similarities:
  - distractibility
  - increased energy

• Characteristic of bipolar d/o:
  - elevated mood
  - periods of sadness or negative mood
  - severe problems regulating emotions
  - flight of ideas
  - decreased need for sleep
  - bursts of energy, exuberant or destructive
  - hypersexuality

What Are Disruptive Behaviors (DBDs)?

• Problems in self-regulation of emotions + behaviors
• Adjustment difficulty in personal + interpersonal domains
• Externalizing disorders (vs. Internalizing disorders)
• Account for 10% of any given school population
• Heterogeneous in presentation, developmental pathways, treatment needs
What are DBDs?

- 2 types:
  - Antisocial behavior pattern
    - Repeated violation of social norms (multiple contexts)
    - Most frequently cited reason for referral to MHS
  - Defiant/disrespectful behavior pattern
    - Involves negative, resistant social interactions, esp. with adults
    - Primary problem is disobedience to adult directives

What is “Normal” Social Behavior?

- “Normal” or “typical” are often oppositional + defiant
  - test limits to see when “no really means no”
  - throw tantrums, have angry outbursts
  - sometimes use aggression to solve problems
  - can be “mean-spirited” (word, deed, action)
  - can lie, cheat, be stubborn, be purposely annoying

What is “Normal” Social Behavior?

- “Normal” or “typical” children grow out of it
  - part of becoming independent
  - learn that there are consequences for refusing to listen, throwing tantrums, hitting people
  - develop “Theory of Mind”
  - moral & cognitive development are in parallel
Disruptive Behavior Disorders – Video
https://www.youtube.com/watch?v=uoXIVWlqXGB

ADHD ≠ DBD
- ADHD can affect behavior + skills
- Similarities: emotional dysregulation +/- impulsivity
- Slower brain maturation in kids with ADHD
  - struggle with frustration tolerance & may react to environment, especially without medication management
- Kids with DBDs seem to look for arguments + ways to rebel
- ADHD can co-exist with DBDs

Diagnostic Challenge
- IRRITABILITY + resultant aggression in children account for 40% of ER evaluations + 20% of pediatric outpatient evaluations
  - no well-validated marker (scale, test, scan, gene)
  - effects persist into adulthood, affecting all aspects of health
  - explicit DSM diagnostic criterion (across ages): mania, GAD, PTSD
  - child-specific modification to criteria for MDD
  - associated feature of ADHD & ASD
  - explicit DSM-5 criterion for ODD
  - in DSM-5, chronic irritability w/o euphoria/BD 5x $\Rightarrow$ DMDD
Thorough evaluation + medical work-up
  (e.g., labs, psychological testing, sensory integration)
Disruptive Mood Dysregulation Disorder (DMDD)

- Symptom onset < 10 years
- Initial diagnosis should not be made < 6 or > 18 years
- Severe + recurrent temper outbursts
  - Grossly out of proportion in intensity or duration to situation
  - Outbursts >3 times/week >= 1 year
  - Between outbursts, display persistently irritable or angry mood
  - At least two settings, at least one year
  - Child must not have gone three or more consecutive months without symptoms.

ADHD vs. Oppositional Defiant Disorder (ODD)

- often loses temper
- argues with adults
- hostile, defiant behavior towards authority figures
- blames others for own mistakes
- annoys people deliberately
- touchy and easily annoyed by others
- often spiteful and vindictive
- pattern of anger-guided disobedience

ADHD vs. Conduct Disorder (CD)

- Repetitive/persistent pattern of behavior
  (Think of it as a more severe form of ODD.)
- Violates others’ basic rights or major age-appropriate societal norms/rules
- Childhood-onset (<10-yo) vs. Adolescent-onset
- Often bullies, threatens others
  - Cruel to animals
  - Destroys property, sets fires
  - Often starts fights
  - Often lies and lacks remorse
  - Skips school, runs away
- Often stays out at night, despite parental rules
Natural History + Associated Features of CD

- ODD is common precursor to CD
- Less severe behaviors emerge first (lying, shoplifting)
- Onset of CD rare after 16-yr
- Caveat: Sometimes behaviors are adaptive, protective
- (30-40%) go on to develop APD
- Increased accident rates
- Generally lower self-esteem
- Higher risk-taking (unsafe sex; SUD)
- Alternative schools; foster placements
- Higher suicide attempt completion
- Common comorbidities: ADHD, learning disability; communication d/o; anxiety d/o; mood d/o

Possible Trajectory of DBDs

A Model of Delinquency
Biological Risk Factors

- Parent with diagnosis of:
  - Substance use d/o
  - Antisocial personality d/o
  - ADHD
  - Conduct d/o
  - Schizophrenia

- Sibling with DBD
- Maternal smoking during pregnancy
- ODD more common in families with serious marital discord

Child Functional Factors

Temperament:
- Difficult temperament (e.g., negative emotionality, inflexibility) predictive of externalizing behavior

Intelligence:
- Low verbal IQ
- Reading disorders may promote disruptive behavior more in girls

Social Cognition:
- Boys with DBDs have problems encoding social cues
- Boys and girls with CD have less empathy

Puberty:
- Early physical maturation → inc. behavior problems in girls

The Runaway
(Norman Rockwell)
**Tic Disorders**

**Definition of a Tic:**
- Sudden
- Rapid
- Recurrent
- Non-rhythmic motor movement or vocalization

**Tourette's Disorder**

- **Multiple motor and vocal tics:**
  - Tics occur many times every day or intermittently for > 1 year
  - Tics can be simple (rapid, repetitive contractions) or complex (appear as more ritualistic and purposeful)
  - Simple tics appear first
  - Onset before 18 years
  - Intensity may wax/wane

**Tourette Syndrome: Characteristics**

- Prevalence is (0.5-1) per 1,000
- Mean age of onset is 7 (onset must be age < 18)
- Male to female ratio is 3:1
- Evidence of genetic transmission: ~ 50% concordance in monozygotic twins
- Associated with increased levels of dopamine
- Associated with ADHD and OCD
- Treatment: haloperidol, pimozide, or clonidine
Anxiety Disorders

- High prevalence rates: (6-20%) (Costello et al., 2004)
- Include:
  - specific phobia
  - selective mutism
  - social phobia
- Developmentally inappropriate or excessive fears
- Sequelae:
  - interpret ambivalent situations negatively
  - underestimate competencies [Rogers & Zigler, 2000]

Anxiety Disorders

**Infants:**
- large noises
- being startled
- strangers

**Toddlers:**
- imaginary creatures
- darkness
- normative separation anxiety
Anxiety Disorders

School-age:
- bodily injury
- natural events

Adolescents:
- school performance
- social competence
- health issues

Before the Shot
(Norman Rockwell)

Separation Anxiety Disorder
• Affects 4%-5% of U.S. children ages 7 to 11 years
• Fear, anxiety, avoidance is persistent (> 1 month)
• Develops after significant stressful or traumatic event
• Children with over-protective parents
• May be a manifestation of parental separation anxiety
• Vulnerability to the disorder may be inherited
Separation Anxiety Disorder

- Constant thoughts, intense fears about safety of parents
- School refusal
- Frequent somatic complaints
- Extreme worries about sleeping away from home
- Being over clingy
- Panic, tantrums when separating from parents
- Trouble sleeping or nightmares

Treatment: behavioral therapy; medication management, if needed

Separation Anxiety Disorder - Videos

- [https://www.youtube.com/watch?v=58khDBvteTs](https://www.youtube.com/watch?v=58khDBvteTs)
- [https://www.youtube.com/watch?v=C051JFcNXRM](https://www.youtube.com/watch?v=C051JFcNXRM)
Autism Spectrum Disorders (ASD)

- Formerly Pervasive Development Disorders
- 1 of every 150 births
- Diagnosis before age 3
- Males > Females (4:1)
- Linked to chromosome 15, chromosome 11
- Concordance: Monozygotic > Dizygotic
- 80% have IQs below 70

Autism Spectrum Disorders (ASD)

- Females tend to have greater intellectual disability
- EEG and seizure disorder (20-25% individuals with autism)
- Diverse set of neural systems affected; but, definitive data lacking

ASD: Clinical Signs

- Deficits in reciprocal social interaction
- Decreased repertoire of activities and interests
- Abnormal or delayed language development, impairment in verbal and non-verbal communication
- No separation anxiety
- Oblivious to external world
- Fails to assume anticipatory posture, shrinks from touch
- Preference for inanimate objects
- Stereotyped behavior and interests
Autism Spectrum Disorder (DSM-V)

Diagnosis: early developmental period; disturbance in 2 domains

(1) Social relatedness and communication [across multiple contexts]
- deficits in social-emotional reciprocity
- deficits in nonverbal communicative behaviors
- deficits in developing, maintaining, understanding relationships

(2) Restricted interests/activities
- adherence to nonfunctional routines
- motor mannerisms (hand flapping, object-twirling)
- persistent fixation on parts of objects
- highly restricted, fixated interests (abnormal intensity or focus)
- hyper- or hyporeactivity to sensory input

Symptom severity scale: “Requiring support; substantial support; or very substantial support”

ASD: Potential Causes

• Association with prenatal and perinatal injury
  e.g., Rubella in first trimester

• Increased risk if mother had asthma, allergies, or psoriasis while pregnant

Drawing by Child
ASD: Differential Diagnosis

- Must rule out:
  - specific developmental disorders (e.g., language d/o)
  - sensory impairments (e.g., deafness)
  - reactive attachment disorder
  - obsessive-compulsive disorder
  - anxiety disorders (selective mutism)
  - childhood-onset schizophrenia

ASD: Differential Diagnosis

- Rett Syndrome
  - Genetic mutation (rare)
  - Girls > Boys
  - Initial development NORMAL; then, regression
  - Onset (6-18) months of age
  - Hand wringing (stereotyped hand movements)
  - Small hands & feet
  - Microcephaly (decreased rate of head growth)
  - Prone to seizures, GI issues, scoliosis

ASD: Differential Diagnosis

Asperger’s syndrome (DSM-IV)

- Language is normal
- IQ is normal
- Higher level of functioning
### Special Education Needs

- Co-existing learning disabilities
- Co-existing intellectual disability (ID)
  - 50% with severe-profound ID
  - 35% with mild-moderate ID
- Speech/communication delays
- Aggression to self or others
- Affective instability
- Require individual supervision

### Mandated by Federal Legislation

**Individuals with Disabilities Education Act**

Programs vary by school district

**IEP (Individualized Educational Plan)**
- Speech therapy
- Occupational therapy
- Communication assistance devices
- Specific teaching technique for autism

### ASD: Treatment

**Behavioral Techniques**
- Shaping
- ABA (Applied Behavioral Analysis)

**Medication Management**
- Does not change core symptoms
- Adjunctive for behavior management
- Atypical antipsychotics (e.g., risperidone)
- Mood stabilizers
- Stimulants
- SSRIs
Therapy Modification Based on Operant Conditioning

**Shaping** (or successive approximations):

- Achieves final target behavior by reinforcing successive approximations of the desired response
- Reinforcement is gradually modified to move behaviors from the more general to the specific responses desired
- e.g., a boy with autism who won’t speak is first reinforced, perhaps with prizes, for any utterance

Autism Spectrum Disorder - Videos

- [https://www.youtube.com/watch?v=YtvPSASOd5U](https://www.youtube.com/watch?v=YtvPSASOd5U)
- [https://www.youtube.com/watch?v=3yfFwOs4R5M](https://www.youtube.com/watch?v=3yfFwOs4R5M)
Gender Dysphoria

- Marked incongruence between one's experienced or expressed gender and his or her assigned gender
- >= 6 months, 2 of 6 criteria (for teens + adults)
- Strong desire to be rid of his/her primary or secondary sex characteristics
- Strong desire for primary or secondary sex characteristics of the other gender
- Strong desire to be of the other (or some alternative) gender
- Strong desire to be treated as the other (or some alternative) gender
- Strong conviction of having the typical feelings and reactions of the other (or some alternative) gender

Gender Dysphoria - Video

- Documentary “Growing Up Trans”

Young Mother and Two Children

(Mary Cassatt)
Eating Disorders

- Pica
- Rumination Disorder
- Avoidant/Restrictive Food Intake Disorder
- Anorexia Nervosa
- Bulimia Nervosa
- Binge-Eating Disorder
- Other Specified Feeding or Eating Disorder

Anorexia Nervosa

- Restriction of energy intake relative to requirements
  - Significantly low body weight in context of age, sex, developmental trajectory, physical health (for children and adolescents, less than minimally expected)
  - Undue influence of body weight or shape on self-evaluation
  - Persistent lack of recognition of the seriousness of current low body weight.
  - Restricting type or binge-eating/purging type
- For adults, severity:
  - Mild: BMI > 17
  - Moderate: BMI 16.0 - 16.99
  - Severe: BMI 15.0 - 15.99
  - Extreme: BMI < 15

Treatment: Multidisciplinary team (child psychiatrist, pediatrician, therapist, dietitian); medication management for comorbid psychiatric disorders; Maudsley approach. Monitor closely for refeeding syndrome during reinstition of nutrition.

Bulimia Nervosa

- Recurrent binge eating
- Def. of binge eating episode:
  - Eating in a discrete time period an amount of food definitely larger than what most individuals would eat in a similar period of time under similar circumstances
  - A lack of self-control over eating during episodes re: intake or regulating what or how much one is eating
- Recurrent, inappropriate compensatory behaviors to prevent weight gain
  - Self-induced vomiting, laxative/diuretic misuse, fasting, excessive exercise
- Binge eating and inappropriate compensatory behaviors both occur, on average, at least once a week for 3 months

Treatment: Multidisciplinary team (child psychiatrist, pediatrician, therapist, dietitian); medication management for comorbid psychiatric disorders. Do not use bupropion! (It can decrease seizure threshold.)
**Binge-Eating Disorder**

- Recurrent episodes of binge eating (as above)
  - Discrete time period, excessive amount of food, lack of self-control
- Frequency: >=1 time/week x 3 months
- Binge-eating episodes associated with >= 3 of the following:
  - Eating much more rapidly than normal
  - Eating until feeling *uncomfortably full*
  - Eating large amounts of food when *not feeling physically hungry*
  - 4. Eating alone because of feeling embarrassed by how much one is eating
  - 5. Feeling **disgusted with oneself, depressed, or very guilty** afterwards

**Severity:**
- Moderate: 4-7 binge eating episodes per week
- Severe: 8-13 binge eating episodes per week

**Treatment:** Psychotherapy (CBT); medication management (topiramate, Vyvanse)

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**Donald Winnicott**

(1896-1971)

“*A baby alone does not exist.*”

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**Holistic Approach**

Bio-Psycho-Socio-Spiritual Formulation
Management/Treatment

- Acute Phase vs. Maintenance Phase
- Psychoeducation
- Medical work-up
  - rule-out thyroid disease
  - hearing/vision screening
- Supportive management (restore realistic hope)
- Psychotherapy (individual, family)
- Family involvement
- Cultural competence
- Liaison with school
- Medication management

Thinking Like a Child Psychiatrist

- Brain development continues into late 20s
- Chronic effect of medications (with early age of onset)
- No arbitrary age cut-offs of 18 or 21
- Respecting developmental milestones; different RATES
- Assessing functional age rather than chronological age
- Shared decision-making with patient, family, systems
- With emerging young adults and transition-of-care:
  - containing and processing significant anxiety and facilitating re-negotiation of boundaries in family system
  - TIMING and READINESS
  (illness complexity/stability; family characteristics; available/accessible providers)

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(i) eating disorders – anorexia nervosa, bulimia nervosa, binge-eating disorder

(5) Explain basic treatment modalities for the above conditions.

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**Resources**

- www.aacap.org/ (American Academy of Child and Adolescent Psychiatry)
- [MGH’s Clay Center for Young Healthy Minds](http://www.mghclaycenter.org/)
- [MGH’s School Psychiatry link](http://www2.massgeneral.org/schoolpsychiatry/)
- [MGH’s website for teenage substance abuse](http://www.massgeneral.org/psychiatry/arms/home.aspx)
- [Website re: collaborative problem solving for children with serious behavioral problems](http://thinkkids.org/)
- www.socialthinking.com
- www.help4adhd.org

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**Thank you**

Children's Mental Health Matters!
Bibliography

- Some references included on individual slides.
- Desk Reference to the Diagnostic Criteria from DSM-5, American Psychiatric Association (APA), 2013.
- Facts on Children’s Mental Health in America, NAMI. May 2006.
- Gutierrez, MB. Presentation on “Developmental/Behavioral Disorders of Childhood.” LUHS-SSOM, 2/20/13.
- Kaplan Test Preparation – USMLE – Step 1 Review Materials (most current version, provided by Dr. Theresa Kristopaitis)
- www.pgine.com (Website of “Centers for Disease Control and Prevention”)
- www.nmed/sns.nh.gov
- www.webmd.com

Video Links

- ADHD – Videos
  http://www.nytimes.com/interactive/2008/05/21/health/healthguide/TE_ADHD_CLIPS.html
- Disruptive Behavior Disorders – Videos
  https://www.youtube.com/watch?v=ulBjVWxjXq8 (4:08)
  https://www.youtube.com/watch?v=IYLIzQ0VvQg (11:42)
- Tic Disorders – Video
  https://www.youtube.com/watch?v=J7Xd9oxtKk4 (4:03)
  https://www.youtube.com/watch?v=n8Vx7KwL7BA (7:02)
- Separation Anxiety Disorder – Videos
  https://www.youtube.com/watch?v=58khDBvteTs (4:03)
  https://www.youtube.com/watch?v=C051JFcNXRM (7:03)
- Autism Spectrum Disorder – Videos
  https://www.youtube.com/watch?v=7Rib33zuS0c (9:02)
- Gender Dysphoria – Video (Documentary)
  http://video.pbs.org/video/2365520005/ (94:12)

Challenges ARE WHAT MAKE LIFE INTERESTING.
OVERCOMING THEM IS WHAT MAKES THEM MEANINGFUL.
Appendix

Material in this "Appendix" will not be included on the section exam and is intended to be helpful when preparing for USMLE – Step 1 and/or clerkship experiences.

### Developmental Milestones

<table>
<thead>
<tr>
<th>Age</th>
<th>Physical and Motor Developments</th>
<th>Social Developments</th>
<th>Cognitive Developments (Play)</th>
<th>Language Developments</th>
</tr>
</thead>
</table>
| 6th year of life | * Puts everything in mouth  
* Sits with support (6 mos)  
* Claus, fear of falling (8 mos)  
* Places grasp (10 mos)  
* Follows objects to mid-line (6 mos)  
* Free-hand and grasp of toy  
* Rests in mouth (5 mos)  
* Raft and sitter stage  
* Changes hands with toy (6 mos) | * Parental figure central  
* Hours of rest are key  
* Stronger society (7 mos)  
* Play is solitary and exploratory  
* Puts-each, peak-a-boo (10 mos) | * Sensation/movement  
* Scheme  
* Accommodation and accommodation | * Louds abed (4 mos)  
* Bisects single object (6 mos)  
* "Hi no, cha da" (10 mos) |

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</thead>
</table>
| Age 1 | * Walks alone (17 mos)  
* CLimb stand alone (18 mos)  
* Emergence of hand preference (6 mos)  
* Knocks ball, throws ball  
* Raft (climbs in back)  
* Stands three times (18 mos) | * Separation anxiety (12 mos)  
* Dependency on parental figure (decreases)  
* Drill, rider play | * Follows objects  
* Nonverbal imitation |  |
| Age 2 | * High activity level  
* Walk, backswards  
* Curtains disappear, unanswerable (18)  
* Scratches, covers  
* Stacks 3 cubes (18 mos)  
* Stands on tip toes (18 mos)  
* Able to sit without hold | * Seeks and self-oriented  
* Identifies, elder siblings and activities  
* May be aggressive  
* Recognition self in mirror  
* "My" as possessive or personal  
| A world of objects  
* Can use symbols  
* Transition objects  
* Strong opposition  
* Concrete use of objects | * Use of pronouns  
* Parents understand most  
* Telegraphic sentences  
* Two-word sentences |  | * Uses 250 words  
* Identifies body parts by pointing  |
Developmental Milestones

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Age 3</td>
<td>Rides bicycle</td>
<td>Fixed gender identity</td>
<td>Complete sentences</td>
<td>Uses 500 words</td>
</tr>
<tr>
<td></td>
<td>Stands 9 months (74.6&quot;)</td>
<td>Sex-specific play</td>
<td>Understands 5+ that</td>
<td>Understands 5+ that</td>
</tr>
<tr>
<td></td>
<td>Alternates feet going up stairs</td>
<td>Understands &quot;taking turns&quot;</td>
<td>Strangers can understand</td>
<td>Strangers can understand</td>
</tr>
<tr>
<td></td>
<td>Bow and bladder control (butler training)</td>
<td>Knows sex and full name</td>
<td>Recognizes common objects in pictures</td>
<td>Recognizes common objects in pictures</td>
</tr>
</tbody>
</table>
|      | Draws recognizable figures | | Can answer, "Tell me what we wear on our feet?" | Can answer, "Tell me what we wear on our feet?"
|      | Catches ball with arms | | "Which block is bigger?" | "Which block is bigger?"
|      | Cuts paper with scissors | | | |
|      | Unbuttons buttons | | | |

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</thead>
<tbody>
<tr>
<td>Age 4</td>
<td>Automobiles</td>
<td>Imitation of adult roles</td>
<td>Imitates teacher</td>
<td>Can tell stories</td>
</tr>
<tr>
<td></td>
<td>Hops on one foot</td>
<td>Correctly shows one (playing checkers)</td>
<td>Three-letter names</td>
<td>Uses plurals</td>
</tr>
<tr>
<td></td>
<td>Grooms self (brushes teeth)</td>
<td>Right and wrong directions</td>
<td>Repetition of digits</td>
<td>Compound sentences</td>
</tr>
<tr>
<td></td>
<td>Counts fingers on hand</td>
<td>Imaginary friends</td>
<td>Names colors</td>
<td></td>
</tr>
</tbody>
</table>

Age 5

- Complete pincer control
- Draws at 35% above adult weight
- Draws recognizable man with head, body, and limbs
- Dresses and undresses self
- Catches ball with two hands

- Can count 50 objects correctly
- Co-operates with peers
- Important economic value for others
- Halves phase

Figures Copied and Approximate Age

Capacity to copy shapes follows in alphabetical order:

Circle, cross, rectangle, square, triangle -

The exception is a "diamond," which can generally not be reproduced until age 7.

- Circle: 9
- Cross: 4
- Square: 4½
- Triangle: 6
- Diamond: 7
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<tr>
<td>Ages 6 to 12</td>
<td>Boys heavier than girls</td>
<td>&quot;Rules of the Game&quot; are key</td>
<td>Abstract from objects</td>
<td>Drift from egocentric</td>
</tr>
<tr>
<td></td>
<td>Rides bicycle</td>
<td>Organized sport possible</td>
<td>Low of conservation achieved</td>
<td>to social speech</td>
</tr>
<tr>
<td></td>
<td>Prints letters</td>
<td>Being team member</td>
<td>Adherence to topic</td>
<td>Incomplete sentences</td>
</tr>
<tr>
<td></td>
<td>Gains athletic skill</td>
<td>Focal for many</td>
<td>Seitaion</td>
<td>decline</td>
</tr>
<tr>
<td></td>
<td>Coordination increases</td>
<td>Separation of the sexes</td>
<td>Regression</td>
<td>vocabulary expands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sexual feelings not</td>
<td>Hemispheric strategies</td>
<td>geometrically (50,000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>apparent</td>
<td>Personal sense of</td>
<td>words by age 1-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Demonstrating</td>
<td>right and wrong</td>
<td></td>
</tr>
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<tr>
<td>Age 12+ (adolescence)</td>
<td>Adolescent &quot;growth spurt&quot;</td>
<td>Identity in critical issue</td>
<td>Abstract from abstractions</td>
<td>Adopts personal speech patterns</td>
</tr>
<tr>
<td></td>
<td>(girls before boys)</td>
<td>Conformity most important (11-12 y)</td>
<td>Systematic problem-solving strategies</td>
<td>Communication becomes focus of relationships</td>
</tr>
<tr>
<td></td>
<td>©Development of primary and secondary sexual characteristics</td>
<td>Organized sports division formany</td>
<td>Can handle hypothetics</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cross-gender relationships</td>
<td>Deals with past, present, future</td>
<td></td>
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</table>

Intellectual Disability

- Significant deficits in intellectual functioning (reasoning, problem solving, planning, abstract thinking, judgment, academic learning, experiential learning)
- Diagnosis via clinical assessment and standardized neurocognitive testing
- Significant deficits in adaptive behavior (failure to meet standards for personal independence, social responsibility)
- Presents as developmental delay
- Not all children with developmental delay have intellectual disability.
Disorders Diagnosed in Childhood

**Intellectual Disability:**

Most common known cause:

→ Fetal alcohol syndrome (FAS)

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Disorders Diagnosed in Childhood

**Intellectual Disability:**

• Most common genetic causes:

→ Down syndrome

→ Fragile-X syndrome

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Down Syndrome Features
Therapy Modification
Based on Classical Conditioning

Systematic desensitization:

- Begins with imagining oneself in a progression of fearful situations and using relaxation
- Often used to treat anxiety and phobias
- When the person is relaxed in the presence of the feared stimulus, objectively, there is no more phobia
- Works by replacing anxiety with relaxation
Therapy Modification Based on Classical Conditioning

**Systematic desensitization:**
- Based on the counterconditioning or reciprocal inhibition of anxiety responses:
  - **Step 1:** Hierarchy of fear-eliciting stimuli is created, building from least to most stressful
  - **Step 2:** Therapist teaches the technique of muscle relaxation, a response that is incompatible with anxiety
  - **Step 3:** Patient is taught to relax in the presence, real or imagined, of each stimulus on the hierarchy from least to most stressful

Therapy Modification Based on Operant Conditioning

**Biofeedback (neurofeedback):**
- Using external feedback to modify internal physiologic states
-Used to be thought that certain functions of the autonomic nervous system (HR, BP, temperature) were beyond the control of a person. We now know that both animals and humans can attain a measure of control over some of their own bodily functions through this technique.

Therapy Modification Based on Operant Conditioning

**Biofeedback:**
- Involves providing the person with information about his internal responses to stimuli and methods to control and/or modify them
- Works by means of trial-and-error learning and requires repeated practice to be effective
- Uses: treatment of HTN, migraine and muscle-contraction headaches, Raynaud syndrome, torticollis, cardiac arrhythmias, and anxiety