

Teacher Workshop Curriculum



UNDERSTANDING AND LEARNING ABOUT STUDENT HEALTH

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UNDERSTANDING AND LEARNING ABOUT STUDENTS' HEALTH



Teacher Workshop Curriculum Outline:

Goal: *To increase teachers' comfort with common topics of adolescent health and improve the interaction between the school and the School Based Health Clinic (SBHC.)*

Workshop Two: ADHD—What Does It Really Mean?

- ADHD Quiz—Test Your Knowledge
- Definition of ADHD and What Causes It?
- Diagnosing ADHD—What is A Teacher's Role?
- Demographics of ADHD and Associated Comorbidities (disorders you often see together with ADHD)
- Treatment of ADHD--Medical vs. Behavioral management



Lesson Plan: ADHD



What Does it Really Mean?

Goal: To understand what ADHD means, how it is diagnosed, and to learn strategies for identifying and managing ADHD in the classroom.

Introduction: Brief introduction of yourself and teachers. Briefly review lesson plan outline. (5 minutes)

ADHD Quiz—Test Your Knowledge: Distribute quiz and allow teachers five minutes to complete. State you will discuss answers at end of workshop. (5 minutes)

What Is ADHD and What Causes It?: (10 minutes) (Review three types, DSM IV criteria, then review handout: *What Is ADHD?*)

--Key points:

- *ADHD has three different types: hyperactive-impulsive; inattentive; combined
- *Strict criteria exist to diagnose ADHD (based on the DSM-IV)
- *Symptoms must be present in more than one place (e.g. home AND school)
- *Must result in impaired functioning (e.g. difficulty with school work, behavior)

Diagnosing ADHD—What is A Teacher's Role? (10 minutes) Review the role a teacher plays in the diagnosis of ADHD. Handouts: *ADHD—What is a Teacher's Role?* and *Sample Questions From ADHD Teacher's Rating Scales*

--Key points

- *Teachers play very important role in diagnosing ADHD
- *Diagnosis usually made by the pediatrician or a specialist (psychiatrist, neurologist), but with input from teacher scales
- *Diagnosis based on history; there are no tests/images that help with diagnosis

How Does ADHD Affect Our Students: (5 minutes)—Review demographics of ADHD as well as comorbidities associated with ADHD. Handouts: *How Does ADHD Affect Our Students* and *ADHD is Often Not The Only Problem*.

--Key points

- *ADHD most common neuropsychiatric disorder of childhood
- *ADHD can negatively affect many aspects of a student's life
- *ADHD is *often* associated with comorbidities (other disorders seen together with ADHD) and it is important to recognize these disorders.

Treatment of ADHD (10 minutes) (Discuss teachers perceptions and experiences with treatment of ADHD; Handout—*Treatment of ADHD*)

--Key points

- *First step in treatment is proper and complete diagnosis
- *Treatment of ADHD involves several modalities
- *Behavior modifications (and classroom modifications) can help
- *Medications play an important role in treatment
- *Important to communicate with parents and physician

Review ADHD quiz (5 minutes)

Questions (5 minutes)



ADHD Quiz—Test Your Knowledge



1. ADHD and ADD are different conditions
 - a. True
 - b. False

2. ADHD is one of the most commonly diagnosed behavioral conditions in children
 - a. True
 - b. False

3. ADHD is easy to recognize
 - a. True
 - b. False

4. ADHD is diagnosed through:
 - a. A blood test
 - b. X-rays or Brain Scans
 - c. Behavioral checklist completed by parents and teachers
 - d. All of the above

5. Responding well to ADHD medication means a child has ADHD
 - a. True
 - b. False

6. Eating less sugar can help children with ADHD
 - a. True
 - b. False

7. ADHD is diagnosed more commonly in
 - a. Boys
 - b. Girls
 - c. Diagnosed equally

8. Although the exact causes of ADHD are unknown, all of the following are considered possible causes, except:
 - a. Genetic factors
 - b. Chemical imbalance in the brain
 - c. Poor parenting skills
 - d. Smoking during pregnancy

From

<http://www.healthcentral.com/adhd/quizzes-192951.html?ic=506016>

<http://www.harvardhealthcontent.com/interactive-tools/ADHD.php>

What is ADHD?

Definition: Attention-Deficit/Hyperactivity Disorder is a “neurobehavioral disorder characterized by pervasive inattention and/or hyperactivity-impulsivity and resulting in **significant functional impairment**.”¹

A Real Disorder: In 2002, 75 scientists from around the world discussed the continuing inaccurate portrayal of ADHD and, in response, signed an “ADHD Consensus Statement.”

“As attested to by the numerous scientists signing this document, there is no question among the world's leading clinical researchers that ADHD involves a serious deficiency in a set of psychological abilities and that these deficiencies pose serious harm to most individuals possessing the disorder....And there is no doubt that ADHD leads to impairments in major life activities, including social relations, education, family functioning, occupational functioning, self-sufficiency, and adherence to social rules, norms, and laws.....”²



What Causes ADHD?³

- The causes/etiologies of ADHD are still not entirely known or agreed upon.
- Research has shown **GENETICS** play important role in ADHD—(if parent has ADHD, 20-50% of children will have ADHD as well).
- There is scientific evidence that persons with ADHD have differences in their:
 - Structure of the brain
 - Chemicals in the brain that play a role in regulating attention and activity (serotonin, dopamine, norepinephrine)
 - Activation in areas of brain that affect impulse control and attention
- However, other non-genetic factors also play role including:
 - Maternal alcohol/tobacco use during pregnancy
 - Prematurity
 - Perinatal brain insults, trauma, infections
 - High exposure to lead
- Child’s environment plays important role in symptoms
- **No Evidence** that sugar, food additives, or poor parenting skills play any role.

¹ <http://www.cdc.gov/ncbddd/adhd/>

² <http://www.healthcentral.com/adhd/c/1443/11538/myth-adhd-real/>

³ <http://www.ed.gov/teachers/needs/speced/adhd/adhd-resource-pt1.pdf>

Diagnosis of ADHD

Diagnosis is based on criteria in DSM IV (Diagnostic and Statistical Manual of Mental Disorders, 4th edition. Manual from American Psychiatric Association that lists all mental health disorders for children and adults as well as the criteria for diagnosing them).

Diagnosis Must Include:

- **Duration:** Symptoms must be present for at least 6 months
- **Early Onset:** Onset of symptoms before age 7
- **Settings:** Symptoms must be present in at least two different settings (e.g. home AND school)
- **Impact:** Must cause clear, significant functional impairment in academic or social life.
- Must **exclude** other diagnosis including mental retardation, Pervasive Developmental Disorder, psychosis, mood disorder.
- Three types:
 - Predominantly **Inattentive** Type—difficulty with organizing/completing a task, following instructions, paying attention to details; often misplaces items
 - Predominantly **Hyperactive-Impulsive** Type—difficulty with sitting still for long periods of time, waiting in line, listening. Often fidgety, talkative, blurts out answers.
 - **Combined** Type—Symptoms of both types are present

Prevalence of ADHD by Diagnostic Subtypes³⁵⁻³⁷

<u>Subtype</u>	<u>Diagnostic Prevalence (%)</u>
Combined	50-75
Inattentive	20-30
Hyperactive-impulsive	<15

<http://www.psychweekly.com/asp/article/articleDetail.aspx?articleid=502>

How do I distinguish poor behavior or not paying attention from true ADHD?

- Many students exhibit some symptoms of hyperactivity and/or inattention; however does not necessarily mean they have ADHD.
- Important that student meets criteria for true diagnosis, including **significant impairment**, presence of symptoms in at least **two settings**.
- If ADHD is suspected, it is important that the student undergoes a **complete** evaluation

DSM-IV

Diagnostic criteria for ADHD

Code based on type:

314.01 Attention deficit/hyperactivity disorder, combined type:

if both criteria A1 and A2 are met for the past six months

314.00 Attention deficit/hyperactivity disorder, predominantly inattentive type:

if criteria A1 is met but criteria A2 is not met for the past six months

314.01 Attention deficit/hyperactivity disorder, predominantly hyperactive, impulsive type:

if criteria A2 is met but criteria A1 is not met for the past six months

314.9 Attention deficit/hyperactivity disorder, not otherwise specified

A. Either (1) or (2)

(1) six (or more) of the following symptoms of inattention have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

- (a) often fails to give close attention to details or makes careless mistakes in schoolwork, work or other activities
- (b) often has difficulty sustaining attention in tasks or play activities
- (c) often does not seem to listen when spoken to directly
- (d) often does not follow through on instructions and fails to finish schoolwork, chores or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
- (e) often has difficulty organizing tasks and activities
- (f) often avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
- (g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books or tools)
- (h) is often easily distracted by extraneous stimuli
- (i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which remaining seated is expected
- (c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts as if "driven by a motor"
- (f) often talks excessively

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before seven years of age.

C. Some impairment from the symptoms is present in two or more settings (e.g., at school, work or at home).

D. There must be clear evidence of clinically significant impairment in social, academic or occupational functioning.

E. The symptoms do not occur exclusively during the course of a pervasive developmental disorder, schizophrenia or other psychotic incident and are not better accounted for by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder or personality disorder.)

Reprinted with permission from the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision. Copyright 2000 American Psychiatric Association.

Diagnosing ADHD--What is a Teacher's Role?



*Diagnosis of ADHD is made based on DSM-IV criteria by a physician. However, diagnosis can't be made without input from child's school as DSM-IV requires symptoms to be present in **multiple settings**. Therefore **a teacher must play an important role in the identification and diagnosis of students with ADHD.***

➤ **REFERRALS:**

- If a teacher suspects a student has symptoms of ADHD, he/she should refer to SBHC and talk with student's parents about specific concerns.
- The SBHC will be in contact with student's parents and primary physician to begin the evaluation.

➤ **EVALUATIONS:**

- "The assessment of ADHD requires evidence directly obtained from the classroom teacher (or other school professional) regarding the core symptoms of ADHD, the duration of symptoms, the degree of functional impairment, and coexisting conditions." (From the *American Academy of Pediatrics' Clinical Practice Guideline: Diagnosis and Evaluation of the Child With ADHD.*)
- As part of the evaluation of a student, a primary physician will likely request a teacher fill out a questionnaire/rating scale. Examples include:
 - **Conner's Teacher Rating Scale**
Long version-- 59 items
Short Version--28 items
 - **ADD-H Comprehensive Teacher Rating Scale (ACTeRS)**
 - **NICHQ Vanderbilt Assessment Scale**
 - **SNAP-IV Teacher Rating Scale**
- These evaluations are an important part of the evaluation/diagnosis of a student with ADHD
- *See next page for sample questions*

➤ **ADVOCACY:**

- ADHD recognized under both IDEA (Individuals with Disabilities Education Act) and Section 504 of Rehabilitation Act
- Student diagnosed with ADHD *MAY* be eligible for special services and/or accommodations under these Acts.

**Sample Questions from ADHD
Teacher's Rating Scales:**

**Sample Questions From:
NICHQ Vanderbilt Assessment Scale—TEACHER Informant¹**

	<i>Never</i>	<i>Occasionally</i>	<i>Often</i>	<i>Very Often</i>
1. Fails to give attention to details or makes careless mistakes in schoolwork				
2. Has difficulty sustaining attention to tasks or activities				
3. Does not seem to listen when spoken to directly				
4. Does not follow through on instructions and fails to finish schoolwork (not due to oppositional behavior or failure to understand)				
5. Has difficulty organizing tasks and activities				
6. Avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort				
7. Loses things necessary for tasks or activities (school assignments, pencils, or books)				
8. Is easily distracted by extraneous stimuli				

Total of 35 questions plus academic and behavior performance rating

**Sample Questions From:
SNAP-IV Teacher and Parent Rating Scale²**

	<i>Not at all</i>	<i>Just a little</i>	<i>Quite a bit</i>	<i>Very much</i>
Often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities				
Often has difficulty sustaining attention in tasks or play activities				
Often runs about or climbs excessively in situations in which it is inappropriate				
Often has difficulty playing or engaging in leisure activities quietly				
Often blurts out answers before questions have been completed				

Total of 35 questions plus academic and behavior performance rating

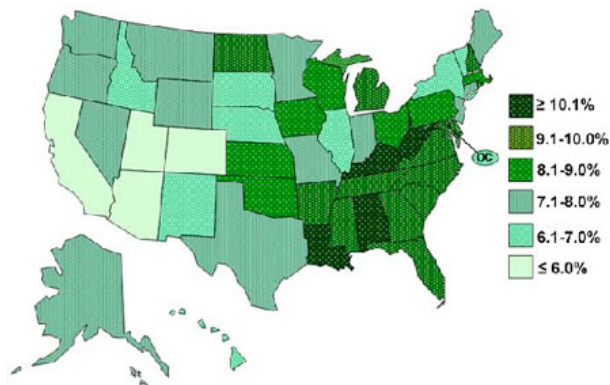
¹ <http://www.nccped.com/ADHD/05.pdf>

² <http://www.myadhd.com/snap-iv-6160-18sampl.html>

How Does ADHD Affect Our Students?

- ADHD is the most common childhood psychiatric disorder
- Estimated 4-12% childhood prevalence of ADHD. (*CDC's 2003 National Survey of Children's Health found 7.8% prevalence in children in the U.S.*¹)
- Boys are 3-4 times more likely to be **diagnosed** with ADHD than girls (whether this represents true prevalence is debated as boys are more likely to have Hyperactive-Impulsive type and therefore may just be more easily identified).
- Between 60-85% of children with ADHD will still meet criteria for ADHD as adolescents.² 30-70% of children with ADHD will continue to have symptoms as adults.³

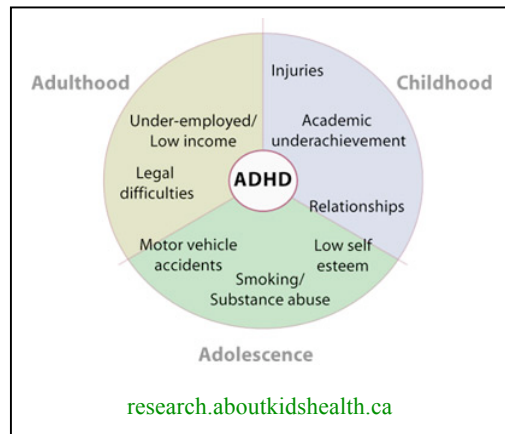
Percent of Youth 4-17 ever diagnosed with Attention-Deficit/Hyperactivity Disorder: National Survey of Children's Health, 2003¹



ADHD in Adolescence

Increased Risk of:

- Substance Abuse
- Earlier/reckless sexual activity
- Motor Vehicle Accidents
- Academic impairment
- Problems with peer relationships



¹ www.cdc.gov/ncbddd/adhd/adhdprevalence.htm

² *Practice Parameter for the Assessment and Treatment of Children and Adolescents with Attention-Deficit/Hyperactivity Disorder*. Journal of the American Academy of Child and Adolescent Psychiatry 2007; 46(7): 894-921

³ <http://www.nimh.nih.gov/publicat/adhd.cfm#adult>



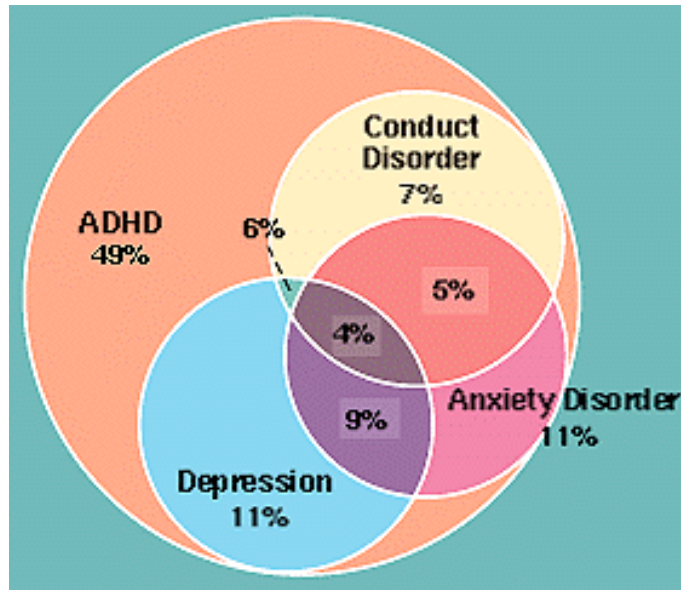
ADHD IS OFTEN NOT THE ONLY PROBLEM

Comorbidities^{32,33}

Disorder	Co-occurrence in children with ADHD (%)
Oppositional defiant disorder	30-50
Mood disorders	20
Conduct disorders	20
Mania	11-23
Tics or Tourette syndrome	7
Any psychiatric disorder	65

<http://www.psychiatryweekly.com/userdocs/ArticleImages/200706wigal-prevalence.jpg>

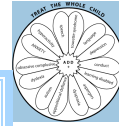
Only approximately 30% of affected students have ADHD as their sole diagnosis.



http://www.ncpamd.com/ADD_Co1.gif



TREATMENT OF ADHD



Treatment of ADHD involves several different modalities

I. Identification, Evaluation, and Diagnosis is First Step

- Without proper evaluation and diagnosis, many child with ADHD go un-treated
- As discussed earlier, failure to treat ADHD can have a significant detrimental impact on a student's life.
- Evaluation should always include looking for co-existing disorders including learning disorders.
- Multiple re-assessments often required.

II. Behavioral Modifications¹:

- Goal is to modify the physical and social environment to result in behavioral changes.
- Aim to increase structure, limit distraction
- Positive reinforcement for desired behavior and setting consequences for inappropriate behavior.
- Need for consistency and repetition of rewards and consequences

TABLE 2
Effective Behavioral Techniques for Children With Attention-Deficit/Hyperactivity Disorder ²

Technique	Description	Example
Positive reinforcement	Providing rewards or privileges contingent on the child's performance.	Child completes an assignment and is permitted to play on the computer.
Time-out	Removing access to positive reinforcement contingent on performance of unwanted or problem behavior.	Child hits sibling impulsively and is required to sit for 5 minutes in the corner of the room.
Response cost	Withdrawing rewards or privileges contingent on the performance of unwanted or problem behavior.	Child loses free time privileges for not completing homework.
Token economy	Combining positive reinforcement and response cost. The child earns rewards and privileges contingent on performing desired behaviors and loses the rewards and privileges based on undesirable behavior.	Child earns stars for completing assignments and loses stars for getting out of seat. The child cashes in the sum of stars at the end of the week for a prize.

Classroom Specific Modifications: *There are many suggestions for teachers to improve academic achievement and behavior in students with ADHD; these include:*

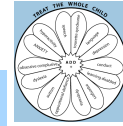
- Daily/weekly progress reports for student and parents
- Work with parents/physician to set clear goals/expectations
- Seat student away from hallway or windows to minimize distractions
- Keep instructions short and simple
- Assign physical tasks intermittently (e.g. passing out pencils; collecting homework.)
- Work on most difficult task/concepts earlier in the day

¹ <http://aappolicy.aappublications.org/cgi/content/full/pediatrics;108/4/1033>

² <http://www.ed.gov/teachers/needs/speced/adhd/adhd-resource-pt1.pdf>



TREATMENT OF ADHD, cont.



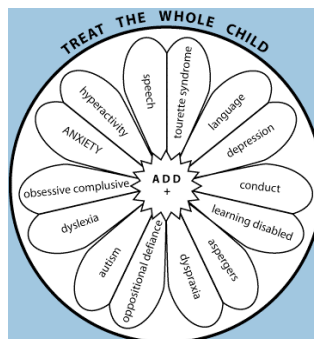
III. Medications:



- Stimulants are the most common type of medication used in treatment of ADHD.
- Examples include Ritalin, Adderall, Concerta, Dexedrine.
- These medications have shown benefits in up to 80% of children with ADHD
- Mechanism of action not fully understood, but thought to act on neurotransmitter (brain chemical) system to decrease symptoms of ADHD.
- Various formulations (long acting vs. short acting) result in varied dosing schedules (e.g. once a day, twice a day, “drug holidays,” etc.)
- Most common side effects include decreased appetite, difficulty sleeping, drowsiness, increased anxiety/irritability, and stomachache/headache.
- Side effects are usually dose-dependent, so if a teacher notices these side effects, he/she should speak with student’s parent who should speak with physician about possible dose adjustment.
- No evidence that lead to drug addiction/abuse (in fact, teenagers with ADHD on stimulants **less** likely to abuse drugs than those with un-treated ADHD.)
- Newer drugs that are not stimulants (e.g. Strattera) now being increasingly used, but limited data on effectiveness and side effects exist.

IV: Most Effective Treatment Involves Multiple Modalities

- Studies have shown that combination of medical management and behavioral modification is an effective way of treating ADHD¹
- Effective diagnosis and treatment of ADHD requires constant communication between the parent, teacher, and physician
- Always remember to look for co-existing conditions and need for special accommodations (e.g. IEP).



¹ <http://www.nimh.nih.gov/health/publications/adhd/complete-publication.shtml#pub6>