

Attention-Deficit/Hyperactivity Disorder

DSM-IV-TR Diagnostic Codes: 314.00; 314.01; 314.9

Attention-deficit/hyperactivity disorder (ADHD) is the most common neurobehavioral disorder of childhood. ADHD is also among the most prevalent chronic health conditions affecting school-aged children. The following guidelines are to be considered within the context of the patient's cultural, ethnic, and spiritual values in order to maximize the accuracy of the diagnosis, the effectiveness of the treatment, and the best possible outcomes for the patient and his/her family.

Diagnostic Guidelines:

1. Establish diagnostic accuracy as defined in DSM-IV-TR.
 - onset of symptoms before age 7
 - significant impairment in social, academic, or occupational functioning
 - impairment from symptoms present in 2 or more settings
 - different subtypes: individuals presenting with symptoms of one subtype may look very different behaviorally from those presenting with symptoms of another subtype
2. Practitioner should conduct a comprehensive evaluation consisting of the following elements:
 - clinical interview with parents or guardian
 - clinical assessment of child or adolescent
 - medical examination or information
 - teacher(s) reports and review of school records
 - ADHD-specific questionnaires and rating scales
 - information from other adults who know the child
3. Routine psychological testing for the assessment of ADHD is not medically necessary and the results of such testing do not confirm the diagnosis of ADHD. However, psychological testing that assesses intellectual and academic functioning may be useful in some cases to clarify the nature and impact of cognitive deficits and assist providers in making appropriate treatment recommendations and interventions.
4. Up to 35% of ADHD cases will display co-morbidity with other behavioral, emotional, and academic problems. Practitioners need to take this fact into account in making a differential diagnosis and in developing treatment plans. Most frequent co-morbid conditions include:
 - Oppositional Defiant Disorder
 - Conduct Disorder
 - Mood Disorders
 - Anxiety Disorders
 - Learning Disabilities
 - Developmental delays or disabilities
 - Substance Abuse Disorder
 - Antisocial Personality Disorder (older adolescents or adults)

5. Consider cultural, age and gender issues. In particular, diagnosis is difficult in children younger than age 4 due to wide variability in the characteristic behavior of preschoolers. Symptoms are most pronounced in school-aged children, when inattention affects academic performance and impulsivity leads to behavioral difficulties. Overt symptoms usually become less conspicuous as children mature, although many carry symptoms into adolescence and, perhaps, adulthood. The disorder is much more prevalent in males than females. Females are more likely to be diagnosed with the Inattentive sub-type of the disorder
6. The core symptoms of ADHD can result in multiple areas of dysfunction relating to a child's performance in the home, school, or community. The primary goal of treatment should be to maximize function. Desired results include:
 - *improvements in relationships with parents, siblings, teachers, and peers*
 - *decreased disruptive behaviors*
 - *improved academic performance, particularly in volume of work, efficiency, completion, and accuracy*
 - *increased independence in self-care or homework*
 - *improved self-esteem*
 - *enhanced safety in the community, such as in crossing streets or riding bicycles. Target outcomes should follow from the key symptoms the child manifests and the specific impairments these symptoms cause.*

Treatment Guidelines:

1. Given the many associated problems and high prevalence of co-morbidity, a multimodal approach to treatment of ADHD should be considered. Treatment planning considerations must take into account the course of the disorder, phase of treatment, age of the patient, intellectual and academic issues, and family dynamics. Parents, children, teachers, and clinicians may wish to select 3 to 6 desired changes. The methods of treatment and of monitoring change will vary as a function of the target outcomes. Intervention strategies might include elements from the following areas:
 - parent training and education about the disorder
 - medication
 - specific educational programs or interventions
 - individual, group and/or family therapy
2. Before pursuing specific interventions, clinicians must help both the individual with ADHD and their family to understand the nature of the disorder, the specific goals of treatment, and the effectiveness of various interventions. The long-term care of a child with ADHD requires an ongoing partnership among clinicians, parents, teachers, and the child.
3. A medication evaluation should take place within 60 days of initial diagnosis. To the extent possible, such evaluation should be done by a child psychiatrist or a general psychiatrist with child training or experience.

4. Due to the chronic, pervasive nature and unremitting course of ADHD, two distinct phases of treatment must be distinguished, each with differing goals and treatment emphases: the Initial Treatment Phase and the Continuation/Maintenance Treatment Phase.
5. If medications and psychosocial treatments are not meeting the desired outcomes, the clinician may wish to evaluate accuracy of the diagnosis, trial of all appropriate treatment options, adherence to the treatment plan, and presence of undiagnosed co-morbid conditions.

Initial Treatment Phase:

Goal: to select and implement intervention strategies likely to improve the symptoms and functioning of children and adolescents with the disorder.

Treatment Components:

1. PARENT INVOLVEMENT

Education about ADHD and parent training in behavioral management techniques are important to increase knowledge, understanding, and management of ADHD, and facilitate parental adjustment to having a child with the disorder. Parents should participate in educational sessions and/or a structured behavioral management program, depending on severity of symptoms, associated problems and level of parental knowledge. Referring to organized parent support groups or associations (e.g., CHADD) should also be considered.

2. CLIENT INVOLVEMENT

“Patient education” is important in helping children and adolescents with ADHD cope effectively with the symptoms and consequences of the disorder. Children are more likely to be successful when they understand their condition, the need for medication, if prescribed, and learn skills to manage the disorder independently. Update the child’s information as they mature and are able to understand.

3. MEDICATION MANAGEMENT

Pharmacological interventions are an important and effective component of overall treatment, and are usually indicated in cases where symptoms are moderate to severe. Psychosocial interventions alone may be sufficient where symptoms are mild. Numerous medications are available to address the primary symptoms of ADHD, although individual needs, the potential for side effects, and parent and child tolerance to medication will drive the choices made. Other medications not specifically prescribed for ADHD (e.g., antidepressants) have been used to treat co-morbid conditions. While medication may lead to rapid improvement in some symptoms, such gains are typically circumscribed and short-term; longer-term adjustment and/or improvements may require one or more forms of psychosocial treatment. Medications should be coordinated with the child’s primary care provider.

4. EDUCATION INTERVENTIONS

Educational interventions and programs are important in order to respond to the frustration and failure in the classroom often experienced by youngsters with

ADHD. Treatment should strive to have similar management strategies and consequences for misbehavior in the home and school settings. Convey results and recommendations of evaluations to school personnel to influence them to target appropriate academic and behavioral programs and resources to the child. Encourage parents to become knowledgeable about various federal and state laws and regulations that may help them secure appropriate resources or placements for their child. Provide parents and/or school personnel with knowledge and materials regarding appropriate classroom structure. Train the child and/or parents in organizational and time management skills which will assist with success in school. The provider should maintain contact with school personnel to help avert crises and regularly assess effectiveness of treatment.

5. THERAPY

Not all children with ADHD will need therapy; comprehensive assessment should identify specific problems and deficits that may need management or remediation through therapy. Modalities may include individual and/or group therapy for child, individual therapy for parent where parental psychopathology may undermine or impede progress, or family therapy where significant problems exist in communication, relationships or parenting practices. If ADHD is co-morbid with another disorder, the nature of the co-morbid condition influences treatment decisions. Treatment should prioritize the symptoms which are of greatest concern or greatest risk to the client or others. Behavioral therapy has a greater likelihood for producing change than play therapy or cognitive-behavioral therapy.

Continuation or Maintenance Treatment Phase

The multimodal approach implemented during initial treatment phase should be continued, as needed, based on continuing assessment of appropriateness and effectiveness.

ADHD Diagnosis and Treatment for Adults

Heightened public awareness of the disorder and its myriad effects has led increasing numbers of adults to seek professional evaluation for ADHD. The following guidelines highlight various cautions and considerations for assessing and treating adults.

Cautions

- Adults must meet the criteria for a DSM-IV-TR diagnosis of ADHD.
- Some adults may seek diagnosis or treatment for the disorder for inappropriate reasons such as: **1)** gaining access to stimulant medications, **2)** avoiding legal responsibility, **3)** obtaining disability payments, or **4)** obtaining special accommodations on professional licensing exams. Providers are encouraged to be particularly diligent in suspicious cases.

Assessment

- Symptoms of ADHD in adults may be manifested differently than in children or adolescents. Inattention may be manifested through: difficulty in completing projects; inconsistent work performance; trouble maintaining an organized living or work space; difficulty learning or remembering new or complex material, etc.

- Hyperactivity or impulsivity may be manifested through: inability to relax or persist in sedentary activities; restlessness or other motor over-activity; difficulty delaying gratification; excessively seeking stimulation; etc.
- Differential diagnosis is particularly challenging. Individuals with established ADHD in childhood or adolescence are at greater risk for developing concurrent disorders later (e.g., mood disorders, substance abuse, antisocial personality disorder). Symptoms of disturbed attention and problems in organization may be present in many different disorders, either psychiatric or medical. An individual with a history of childhood or adolescent ADHD may present with symptoms of another disorder, which may or may not be related to ADHD, depending in part upon whether the ADHD persisted into adulthood or resolved at an earlier age.
- Components of an evaluation for ADHD in adulthood might include:
 - clinical interview (with individual, as well as with spouse or significant other)
 - adult behavioral rating scales (e.g., ADHD Adult Rating Scale)
 - previous school records and report cards (when available)
 - records of previous psychiatric evaluations or treatment, especially in childhood
 - (when available)
 - interview with the individual's parent (if possible)
 - selected tests to assess attention, memory and academic achievement
- In cases where substance use and/or abuse may be causing or exacerbating presenting symptoms, the individual should undergo a comprehensive chemical dependency evaluation.

Treatment

- Pharmacological interventions may improve symptoms and functioning in some adults with ADHD. Individuals should first undergo a physical examination to rule out medical conditions that would contraindicate the medications being considered. For example, stimulant medication may be inappropriate for someone with high blood pressure, a seizure disorder, or a potential for substance abuse.
- Treat severe psychiatric conditions (e.g., mood or anxiety disorders, substance abuse) prior to or concurrent with treatment for ADHD.
- Abstinence from alcohol, drugs, and cigarettes may lead to a remission of ADHD symptoms.
- Psychosocial treatments, emphasizing educational and behavioral approaches, may be beneficial as an adjunct to medication therapy. Areas of focus may include: life management skills (e.g., organization, time management, etc.), anger management, stress management, symptom management, vocational selection or preparation.
- Patients treated with medication for ADHD should have their height and weight monitored throughout treatment.

References:

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ADDITIONAL RESOURCES

Many, many sites exist on the Internet with information, education, clinical considerations and personal opinion about ADHD. Some sites would be relevant to affected individuals, parents or family members, school personnel and clinical providers.

- Children and Adults with Attention Deficit Disorder (C.H.A.D.D.), 8181 Professional Place, Suite 201, Landover, MD 20785 **Telephone #:** (800) 233-4050 **FAX #:** (301) 306-7090
- Attention Deficit Disorder Association (ADDA), P.O. Box 972, Mentor OH 44061 **Telephone #:** (800) 487-2282

- Attention Deficit Information Network (AD-IN), 475 Hillside Avenue, Needham, MA 02194 **Telephone #:** (617) 455-9895
- Chesapeake Institute - ADD Resource Bank, 1000 Thomas Jefferson St., NW, Suite 400, Washington, D.C. 20007 **Telephone #:** (202) 342-5600 **FAX #:** (202) 944-5454
- Exceptional Children's Assistance Center (ECAC), P.O. Box 16 Davidson, NC 28036 **Telephone #:** (800) 962-6817
- American Academy of Child and Adolescent Psychiatry <http://www.AACAP.org>