

NEIGHBORHOOD HEALTH PLAN OF RHODE ISLAND

Section: Clinical Practice Guideline	Subject: Diagnosis and Management of Attention Deficit Hyperactivity Disorder (ADHD) in Primary Care for School-Age Children and Adolescents
Effective: August 17, 2000	Updated: July 11, 2002; June 10, 2004; July 14, 2005; June 8, 2006; June 12, 2008

Rationale

ADHD is one of the most common childhood behavioral disorders, affecting at least 3-5% of school-age children. ADHD is often diagnosed between the ages of 6 and 12 years old and is a neurobiological chronic condition that follows an individual from childhood to adulthood. (A possible diagnosis of ADHD before the age of 6 should be referred for specialty evaluation.) The successful diagnosis and management of ADHD requires a multifaceted, multidisciplinary, coordinated approach. Pediatricians, family physicians, neurologists, and and/or psychiatrists can successfully manage ADHD, although treatment can be complex.

The purposes of this guideline are:

1. To endorse the Institute for Clinical Systems Improvement (ICSI), Seventh Addition, March 2007. The complete guideline can be found at www.icsi.org.
2. To further define a primary care approach to treatment which emphasizes appropriate use of stimulant medication in conjunction with behavioral and school-based treatment tailored to the needs of the individual child and his or her family.
3. To emphasize that ADHD is a chronic condition requiring long-term, child- and family-specific care that requires a multifaceted treatment approach and coordination of care with clinical and non-clinical entities.

Diagnosis & Management Highlights and Recommendations

According to ICSI the following are the Clinical Highlights and Recommendations for the diagnosis and management of ADHD in the primary care setting:

- Evaluation of children/adolescents should be based on DSM-IV/DSM-PC diagnostic criteria and tools (see Annotation #4 of the ICSI guideline).
- Screenings for other primary conditions/co morbidities should be part of the initial evaluation. Referrals to sub specialists for consultation and further evaluations may be necessary for the diagnosis and treatment of ADHD (see Annotation #5).
- Coordination of treatment modalities to include parents and child/school focused interventions is recommended for the diagnosis and treatment of ADHD. Establish and coordinate communication and interventions with related systems (i.e. Schools, mental health) (see Annotations #14, #16, #17, #18).

- Establish appropriate use of medications in both the initial and ongoing management of patients with ADHD. Consistent and comprehensive monitoring and care coordination (pharmacologic and non-pharmacologic interventions), interventions, identification and management of co-morbidities. Management of the impact of ADHD on the patient, family members and schools. (see Annotations #20, #24)

Due to the range of clinical complexities and the variety of treatment modalities, no single strategy exists that is effective with all children. The diagnosis and management approach requires a multifaceted, coordinated approach.

Evaluation for ADHD

Successful treatment of ADHD begins with a comprehensive evaluation. Evaluations for ADHD should include each patient's core symptoms, co-morbidities, the use of standardized criteria and tools, and the evaluation of medical, psychiatric, psychosocial and academic histories and difficulties.

1. Learning/Behavior Problems – Symptomology varies and is age dependent. Referrals are made to primary care physicians typically because of learning problems at school or behavior difficulties at home or school. Possible presenting problems identified by parents are:
 - Noncompliance
 - Aggressiveness and/or anger management difficulties
 - Impulsiveness
 - Dangerous physical behavior
 - Disorganization; Messiness; Difficulty completing tasks
 - Concentration difficulties
 - Hyperactivity
 - Social/emotional “immaturity”

In addition to the demonstration of the above behaviors, school based personnel may identify the following problems:

- Inattention and/or distractibility
- Listening difficulties
- Disruptive behavior in the classroom including talking excessively and self control difficulties
- School failure
- Socialization difficulties

Children and adolescents may present with the following:

- Difficulties making friends
- Negative feelings towards school
- Poor self-esteem
- Parental conflict

2. With any patient that presents with behavioral health symptoms, a crisis evaluation is required to identify if emergent attention is needed. A crisis evaluation should identify the following:
 - Suicidal thoughts or threats
 - Harmful/violent thoughts or threats

Evaluations specific to children/adolescents should also include threats of violence or harm to the child/adolescent. Evaluations should also include threats of legal action, arrests or school expulsion.

It is the responsibility of the treating clinician to identify the referral protocol when a crisis is identified (i.e. Calling 911 or coordinating a mental health appointment).

3. Evaluation of ADHD using DSM-IV/DSM-PC Criteria.

The DSM-IV criteria is the most “widely used” criteria for the diagnosis of ADHD. Primary Care Physicians have an additional resource DSM-PC. The DSM-PC combines DSM –IV criteria with additional behavioral health information and differential diagnosis.

Other tools endorsed by ICSI include:

- Child Attention Profile
- Conners Parent and Teacher Rating Scale
- Achenbach Child Behavior Checklist and Teacher Report Form
- Youth Self-Report
- Devereaux Scales of Mental Disorders
- Behavioral Assessment System for Children
- Toolkits developed through the American Academy of Pediatrics (AAP)

For specific symptoms, criteria please refer to the DSM-IV/DSM-PC criteria.

4. According to ICSI, 44% of children diagnosed with ADHD have another psychiatric disorder. 32% have two other disorders and 11% have three other disorders. These statistics are comparable with other published sources. Because of the prevalence of co-morbidity, evaluations should include strategies for assessments.

Tools endorsed by ICSI for assessment of co-morbid conditions include:

- Child Behavior Checklist
- Children’s Depression Inventory
- Children’s Manifest Anxiety Scale
- Academic Performance Reporting Scale
- Achenbach Child Behavior Checklist
- Teacher Report Form

- Youth Self Report
- Devereux Scales of Mental Disorders
- Behavioral Assessment System for Children

Exploring differential diagnoses should also be included in the evaluation of ADHD.

- Medical (physical/neurological/development health history)
- Psychiatric (depression, anxiety disorders, conduct disorders, substance abuse, developmental disorders)
- Psychosocial (family history of mental illness/substance abuse, life changes or events, loss, abuse trauma, family strengths/weaknesses, cultural, spiritual)
- Speech/Language/Hearing difficulties
- Academic/Learning difficulties

Management

After a comprehensive evaluation is completed, ADHD may not be the primary diagnosis; therefore, these guidelines would not apply. If after an evaluation is completed, ADHD is the primary diagnosis, other conditions may be suspect as well. Treating providers need to assess whether additional supports are needed from other medical or behavioral health specialists. Coordination of care with clinicians and non-clinicians (parents, schools) is a critical component in the successful diagnosis and management of ADHD. Coordinated efforts with non-clinicians include:

- Education of parents (management skills, support groups, advocacy groups, federal and state laws regarding specialized instruction and accommodations in the classroom)
- Schools (appropriate school programming and supports, education regarding medication)
- Education of child (social skills training, cognitive behavioral therapy, study skills)

Clinically, medications are effective in the treatment of ADHD. Options for first line medications include:

- Psycho stimulant medications – methylphenidate (Ritalin, Metadate ER, Concerta, Daytrana), dex-methylphenidate (Focalin), dextroamphetamine (Dexedrine; and amphetamine salts (Adderall), Adderall XR)
- Norepinephrine reuptake inhibitor – atomoxetine (Strattera)

According to ICSI and other published resources, psycho stimulants are 70-80% effective in the treatment of ADHD. Overall, treatment with psycho stimulants is safe; however contraindications can include psychosis or cardiovascular conditions. Psycho stimulants do not require blood work, however, clinicians should monitor patients for the following side effects:

- Decreased appetite
- Insomnia

- Headaches
- Stomachache
- Weight loss
- Irritability

Atomoxetine (Strattera) has also been effective in the treatment of ADHD. Side effects are possible and can include:

- Somnolence
- Nausea
- Anorexia
- Increase in blood pressure or heart rate
- Skin rash

The Food and Drug Administration (FDA) issued a paper in 2004 warning clinicians about the potential for severe liver injury, although liver function tests are not recommended at this time. In 2005 the FDA issued alerts about the increased risk of suicidal thinking in children/adolescents being treated with Strattera. Labeling includes a boxed warning.

In 2006 the FDA ordered additional labeling for all stimulants warning of death when used with children/adolescents with cardiac abnormalities or other serious heart problems. If risks or potential risks are identified, a cardiac evaluation is recommended.

In 2008, the American Heart Association (AHA) published concerns that stimulants may increase adverse events, inclusive of sudden cardiac death, in children with congenital heart disease. The AHA now recommends the following:

- Obtain a complete patient and family history with careful attention to conditions such as cardiomyopathy and Marfan syndrome
- Perform physician exam to check for cardiovascular abnormalities including heart murmurs and hypertension.
- Consider ordering an EKG
- Arrange a consult with a pediatric cardiologist if abnormalities are discovered

Additionally, the AHA concludes:

- All children prescribed stimulants should be routinely monitored for cardiac symptoms
- Stimulants remain a reasonable option for children with stable heart disease, or those under a pediatric cardiologist's care
- For children already on stimulants, physicians may want to take a complete history, review the physical exam, and order an EKG

For updated information on medications to treat ADHD, providers are recommended to go to the following websites:

<http://medlineplus.gov/>

http://www.nhpri.org/matriarch/MultiPiecePage.asp_Q_PageID_E_107_A_PageName_E_ForProvidersClinProgADHD

If the use of stimulants and atomoxetine are unsuccessful, the following second line medications are recommended by ICSI:

- Tricyclic antidepressants – imipramine (Tofranil), desipramine (Norpramine)
- Alpha adrenergic agonists – clonidine (Catapres, Tenex)
- Nonticyclic antidepressant – bupropion (Wellbutrin, Wellbutrin SR)

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Maintenance and Ongoing Care

ADHD can be categorized as a chronic disorder because it will follow children/adolescents through adulthood. Ongoing management during the initial treatment of the disorder should include both phone contact and office visits. Once a patient is deemed stable by the provider, ongoing office visits can occur every 3-6 months. Follow-up review visits by clinicians should include assessments of psychosocial, educational, and psychological functioning. As a child/adolescent begins to reach adulthood, it is important for clinicians to assist in transitioning patient care with the necessary supports in place. Supports for the transition may include:

- Vocational evaluations
- Counseling
- Training
- Assists with time management and study skills

Neighborhood Health Plan of Rhode Island partners with Beacon Health Strategies to manage the delivery of mental and substance abuse services for all Neighborhood members. Beacon Health Strategies has local staff available to all medical providers if assistance is needed for behavioral health referrals. Should a medical provider need a referral, Beacon staff can be reached at 1-800-215-0058.

BIBLIOGRAPHIC SOURCE

Institute for Clinical Systems Improvement (ICSI – www.icsi.org)
Physician's First Watch for April 22, 2008 (FirstWatch@watch.org)