INTRODUCTION

The essential feature of attention deficit and hyperactivity disorder is the persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development. (AAP, DSM-IV p 80 http://justines2010blog.files.wordpress.com/2011/03/dsm-iv.pdf). The prevalence of Attention-Deficit/Hyperactivity Disorder is estimated at 3%-5% in school-age children.

Data on prevalence in adolescence and adulthood however are limited. Usually, the disorder is first diagnosed during elementary school years, when school adjustment is compromised. In the majority of cases seen in clinical settings, the disorder is relatively stable through early adolescence.

The primary care provider should recognize that ADHD is a chronic condition and therefore consider children and adolescents with ADHD as children and youth with special health needs. Care of such children should utilize the principles of medical home and chronic care models to guide treatment.

SUMMARY OF RECOMMENDATIONS

Evaluation

The primary care provider should evaluate a child 4-18 years old who present with academic and behavioral problems accompanied by reported symptoms of inattention, hyperactivity, or impulsivity. The provider should first determine that diagnostic criteria is met as defined by American Psychiatric Association, 2013, Diagnostic and Statistical Manual of Mental Disorders – 5th Edition (http://www.psychiatry.org/practice/dsm/dsm5/online-assessment-measures) documenting impairment of the child in more than one setting (e.g. school and home).

The provider should also utilize supporting documents utilizing a validated instrument such as the Vanderbilt Assessment (https://www.chadd.org/Understanding-ADHD/Parents-Caregivers-of-Children-with-ADHD/Evaluation-and-Treatment/Evaluation-and-Assessment-Tools.aspx) to from schools, mental health providers, teachers, guardians, parents, and/or other school clinicians/other significant adults. Assessment for the coexistence of other conditions such as emotional, behavioral, developmental, or physical disorders (e.g. anxiety, depression, oppositional defiance, conduct disorder, learning or language disorders, neurodevelopmental disorders, tics, sleep apnea, etc.).

Careful consideration should be given to rule out any other possible cause such as undetected seizure conditions, middle ear infections resulting in hearing change or loss, undetected vision or hearing problems, medical conditions that may affect thinking and behavior, learning disabilities, or significant and sudden life changes such as death of a family member, a divorce, or parental job loss.

Risk Factors for ADHD

Attention-Deficit/Hyperactivity Disorder has been found to be more common in the first-degree biological relatives of children with Attention-Deficit/Hyperactivity Disorder. Studies also suggest that there is a higher prevalence of Mood and Anxiety Disorders, Learning Disorders, Substance-Related Disorders, and Antisocial Personality Disorder in family members of individuals with Attention-Deficit/Hyperactivity Disorder.

Other causes of note are genetic predisposition, environmental factors, brain injuries, sugar, and food additives.
Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

(1) six (or more) of the following symptoms of inattention have persisted for at least 6 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 6 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 age 7 years.

C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and 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 Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).
Treatment

Treatment of children and youth with ADHD vary depending on age:

1. Age 4-5 (preschool) – evidence based parent and/or teacher administered behavior therapy is first line treatment and may prescribe a stimulant medication if the behavior interventions do not provide significant improvement and there is moderate to severe behavior continuing disturbance in the child’s function. If behavioral treatment is not available, providers should weigh risk of starting medication at an early age against harm of delaying diagnosis and treatment.

2. Age 6-11 (elementary school) – providers should prescribe USFDA approved medication for ADHD and/or evidence based parent and/or teacher administered behavior therapy as treatment, preferably both. Per AAP’s 2011 guideline on ADHD, the evidence is particularly strong for stimulant medications and sufficient but less strong for atomoxetine, extended release guanfacine, and extended release clonidine (in that order). The school environment, program, or placement is part of any treatment plan.

3. Age 12-18 (adolescents) – the provider should prescribe USFDA approved medications for ADHD with the assent of the adolescent and may prescribe behavior therapy as treatment for ADHD, preferably both.

The provider should titrate doses of medication for ADHD to achieve maximum benefit with minimum adverse effects. Providers should also be cautioned that there is a risk of psychoactive drug interactions and should consult psychiatry on medications.

Taken from AAP ADHD guideline please access pg. 10-12 of AAP ADHD Guideline at http://pediatrics.aappublications.org/content/early/2011/10/14/peds.2011-2654.full.pdf

PARENT EDUCATION:

Education of parent is central to treatment and to ensure cooperation to reach goals. Parents should be warned that frequent titration of medication and/or change of medication is sometimes necessary to reach optimal medication management as well as successful treatment and may take several months to achieve.

The AAP released new guidelines for treatment of ADHD in 2011 and were endorsed by the AAFP in 2012 and can be fully accessed at http://pediatrics.aappublications.org/content/128/5/1007.full

Pediatric Attention Deficit & Hyperactivity Disorder

References:


