

# BEST PRACTICES FOR PRIMARY CARE PROVIDERS IN DIAGNOSIS, TREATMENT, & MANAGEMENT OF CHILDREN WITH ADHD

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## Abstract

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common neurobehavioral disorders of childhood and adolescence. The primary symptoms of ADHD are pervasive and may affect a child's functioning at home, at school, and in social context leading to academic underachievement, difficulties in interpersonal relationships, and poor self-esteem.

In 2001 the American Academy of Pediatrics (AAP) developed the diagnosis guidelines because of the importance of accurate and evidence-based ADHD diagnosis and aimed it towards the general pediatrician or family physician's use. Despite the DSM-IV criteria and AAP guidelines, primary care providers have had difficulty implementing these tools for accurate diagnosis into their daily practices. Using a combination of the AAP guidelines and algorithms, DSM-IV criteria, and partners in the school & mental health systems will ensure better management of this chronic disease.

## Introduction

ADHD is one of the most common neurobehavioral disorders of childhood and adolescence. Prevalence rates can range from 1.7% to 16% depending on the population and diagnostic criteria used (Honeycutt, Sleath, Bush, & Campbell, 2004). This brain disease impairs attention, alertness, abstract reasoning, planning, mental flexibility and working memory (Culpepper, 2006). The primary symptoms of ADHD are pervasive and may affect a child's functioning at home, at school, and in social context leading to academic underachievement, difficulties in interpersonal relationships, and poor self-esteem.

Toomey, Finkelstein, & Kuhlthau (2008) found that a primary care medical home is not as successful at meeting the needs of children with ADHD as it is with other medical conditions such as asthma. These findings also suggest that primary care medical professionals should rethink how they screen, diagnose, and treat mental health conditions (Toomey, 2008). Ideally mental health professionals would be involved in the care of a child with ADHD, but due to a shortage in the field, management of ADHD is often left to primary care providers. Pediatricians and family practitioners are often the first or only health care professionals involved in a child's mental health care (Bussing, Schuhmann, Belin, & Widawski, 1998).

In 2001 the AAP developed the diagnosis guidelines because of the importance of accurate and evidence-based ADHD diagnosis. Barriers for primary care physicians in implementing the AAP guidelines can include issues in collaboration with schools, lack of time, challenges with coexisting conditions and limited diagnostic information in the AAP guidelines (Leslie, Weckerly, Plemmons, Landsverk, & Eastman, 2004).

## Methods & Materials

A literature review was conducted using PubMed/Medline and MDConsult with "ADHD", "family physician", and "pediatrician" as search terms.



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## Results

### **Screening**

Screening tests that obtain information directly from parents may be more appropriate for primary care providers as opposed to requiring direct observation or elicitation of developmental skills (Rader et al., 2009). The following questions devised by the AAP may be useful as an initial screening tool: "How is your child doing in school? Are there any problems with learning that you or the teachers have noticed? Is your child happy at school? Are you concerned with any behavioral problems in school, at home or when your child is playing with friends? Is your child having problems completing homework? These questions can easily be used at well-child checks or athletic physicals." All family physicians can facilitate early detection of ADHD by asking appropriate questions to the child and parents at every consultation (Karande, 2005).

### **Diagnosis**

Results from a rating scale alone will not provide sufficient information to make a diagnosis, but in turn can support a diagnosis. The Conners' Teacher and Parent Rating Scale-Revised, CTPRS-R, is a commonly used modality in the US (Carter & Syed-Sabir, 2008).

A clinician may consider diagnostic testing or imaging if the studies are indicated by past medical history, environmental history or physical exam to exclude other conditions, not confirm ADHD. Common differential diagnoses to consider are adverse effects of other medications, allergic rhinitis, asthma, hypothyroidism, malnutrition, sensory impairment, or sleep disorders (Rader et al., 2009).

Using the child's behavior in the office isn't a true evaluation of their symptoms because it is in a false environment. The use of stimulants to confirm diagnosis could lead to unnecessary medication use in children that truly don't meet the criteria for ADHD or failure to make a diagnosis because not all children with ADHD respond to stimulants.

It is common for symptoms of ADHD to overlap with those of other learning disabilities or mental health conditions, and co-existing conditions are frequent (Rader et al., 2009). Common co-existing conditions can include, but are not limited to anxiety, conduct disorder, mood disorder, oppositional defiant disorder, tic, or substance abuse (Rader et al., 2009). Children with ADHD should be evaluated for other medical, psychiatric and environmental conditions, keeping in mind a variety of differential diagnosis (Rader et al., 2009).

The AAP (2001) published an algorithm for the evaluation of ADHD. This algorithm can quickly be accessed and easily used by providers. Unfortunately, however, this algorithm has not been widely promoted. Algorithms have been introduced into other aspects of health care, such as advanced cardiac life support, to reduce complications and mistakes. Meehl (1954) concluded that statistical predications, such as diagnosis by an algorithm, surpass clinical judgment alone. This finding has recently been supported by Grove and Lloyd (2006). The algorithm updated to fit on laminated note cards or easily accessed in PDA's would facilitate the ease of use of the AAP guidelines and DSM-IV criteria.

### **Treatment**

Findings from the MTA study at 14 months indicate that pharmacotherapy was significantly more effective than behavioral and community treatments. The behavioral treatment only modestly enhanced the effect of medication alone and the behavioral treatment alone was no more effective than the treatment received by children in the community comparison group on core symptoms of ADHD (MTA Cooperative Group, 1999). Early and accurate diagnosis with behavioral and pharmacologic treatment can help achieve the best long-term outcome. Even though research shows stimulant medications are very efficacious and side effects easily managed, a majority (58%) of physicians would prefer to prescribe a non-controlled medication that doesn't have the abuse potential (Stockl, Hughes, Jarrar, Secnik, & Perwien, 2003).

It may seem an overwhelming task in choosing a stimulant medication, but the McMaster report reviewed 22 studies and found no differences between methylphenidate and dextroamphetamine. If a child does not respond to a first-line stimulant agent, a second stimulant medication should be tried before moving on to second or third line therapies (Rader et al., 2009). Approximately 70% of children will respond favorably to the first stimulant medication used and when stimulant medications work properly, they maximize the impact of the other treatment strategies (Baldwin, 2003). Primary care providers need to be familiar with all types of pharmacologic therapy and comfortable with the long term management of ADHD.

Primary care providers cannot work alone when managing the treatment of children with ADHD. Important diagnostic information and successful treatment relies on parents, teachers and counselors. It is important to counsel parents on the expected outcome of treatment because even with stimulant and/or behavioral modification it may not bring a child with ADHD into the normal ranges (Subcommittee on ADHD, 2001).

The AAP published an algorithm for the treatment of school-aged children with ADHD to facilitate the appropriate treatment (Subcommittee on ADHD, 2001). This algorithm could improve treatment management if it was widely promoted and easily accessible. By addressing the barriers to using the AAP guidelines, primary care providers will improve upon the initial treatment strategies and the long term management of ADHD.

## Conclusion

ADHD can be a debilitating condition that causes personal, academic, and social implications on a child's life. Despite the DSM-IV criteria and guidelines by the AAP, family practitioners and pediatricians alike have difficulty adhering to the criteria and guidelines to properly diagnose and treat children presenting with ADHD. All primary care providers can play a crucial role in coordinating assessment and managing treatment, ensuring that no child with ADHD loses out in life. Primary care providers can facilitate the use of the DSM-IV criteria and AAP guidelines by the use of the ADHD toolkit and wide promotion for following the AAP algorithm for easy access to the guidelines and ease of use. Use of an algorithm in treatment ensures guidelines and criteria for proper therapy strategies are followed for the best possible outcome for the child. Treatment of ADHD can be better managed when it is treated as a chronic condition with parents and children fully informed on the disease process and involved in decision making. This facilitates the compliance of behavioral and pharmacologic therapy. Providers finding allies in the school and mental health systems will have further success in the management of children with ADHD. Additional research needs to be done to show the efficacy of using a combination of all ideal practices.

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