

# **INTRODUCING THE AAP'S NEW ADHD CLINICAL PRACTICE GUIDELINE FOR THE DIAGNOSIS, EVALUATION AND TREATMENT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN CHILDREN AND ADOLESCENTS**

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## DISCLOSURES

- I have no relevant financial relationships to disclose or conflicts of interest to resolve
- I will discuss no unapproved or off-label pharmaceuticals

# **CLINICAL PRACTICE GUIDELINE FOR THE DIAGNOSIS, EVALUATION, AND TREATMENT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) IN CHILDREN AND ADOLESCENTS OCTOBER, 2019**

The AAP SUBCOMMITTEE ON CHILDREN AND ADOLESCENTS WITH  
ATTENTION-DEFICIT/HYPERACTIVE DISORDER

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# **CLINICAL PRACTICE GUIDELINE FOR THE DIAGNOSIS, EVALUATION, AND TREATMENT OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) IN CHILDREN AND ADOLESCENTS OCTOBER, 2019**

## **PROVENANCE**

- AAP CPG first published in 2000
  - Guidelines for Treatment published in 2001
- CPG revised in 2011
  - Algorithm for Care published as companion article
- 2019 CPG revision
  - Supplement: Process of Care Algorithm
  - Supplement: Systemic Barriers to the Care of Children and Adolescents with ADHD,

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Ages 4 to 18
  - Preschool: age 4 through the 6<sup>th</sup> birthday
  - School aged: ages 6 through 10
  - Adolescent: ages 11 through 18
- However, patients with ADHD over 18 years of age are often cared for by pediatric clinicians
  - Care beyond this age was not studied for these Guidelines

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Ages 4 to 18
- Special guidance is provided for
  - Preschool age
  - Adolescence

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Prevalence estimates:
  - Pooled worldwide ADHD prevalence of 7.2% among children
  - Some community-based samples are somewhat higher, at 8.7% to 15.5%.
  - National survey data from 2016 indicate that 9.4% of children in the United States 2 to 17 years of age have ever had an ADHD diagnosis
    - including 2.4% of children 2 to 5 years of age
  - 8.4% of children 2 to 17 years of age currently had ADHD, representing 5.4 million children. Of these, in the past year
    - almost two thirds were taking medication
    - approximately half had received behavioral treatment for ADHD
    - but nearly one quarter had received neither type of treatment for ADHD

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Prevalence
  - Boys more than 2x as likely to be assigned this diagnosis
  - Median age of diagnosis is 7 years
    - > one third before age 6
    - > one half first diagnosed by a Primary Care Clinician (PCC)



# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Common comorbid conditions include:
  - Language and learning differences
  - Externalizing conditions, predominantly in boys
    - Oppositional Defiant Disorder (ODD)
    - Conduct Disorder (CD)
  - Internalizing conditions, predominantly in girls
    - Anxiety
    - Depression
- Entering adolescence,
  - hyperactive and impulsive symptoms tend to decline
  - Inattentive symptoms tend to persist

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Methodology
  - Subcommittee included
    - primary care pediatricians
    - a wide range of subspecialty representatives
    - representatives from other clinical organizations
    - families
  - Research was evidence-based review sponsored by one of the US Agency for Healthcare Research and Quality's (AHRQ) Evidence-Based Practice Centers
- Evidence
  - The AAP policy statement, "Classifying Recommendations for Clinical Practice Guidelines," was followed in designating aggregate evidence quality levels for the available evidence

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Peer review
  - Over 30 internal and external stakeholders provided comment
- Funded in part by US CDC

# AAP ADHD CLINICAL PRACTICE GUIDELINES

- Composition
  - Seven KEY ACTION STATEMENTS (KAS)
  - Implementation discussion
  - Supplemental algorithm for implementation
  - Supplemental consideration of barriers to care

# EVIDENCE

Evidence was assessed in accordance with the AAP policy statement, “Classifying Recommendations for Clinical Practice Guidelines,”

- Grade A: Consistent level A studies.
- Grade B: Consistent level B or extrapolations from level A studies.
- Grade C: Level C studies or extrapolations from level B or level C studies.
- Grade D: Level D evidence or troublingly inconsistent or inconclusive studies of any level.
- Level X: Not an explicit level of evidence as outlined by the Centre for Evidence-Based Medicine. This level is reserved for interventions that are unethical or impossible to test in a controlled or scientific fashion and for which the preponderance of benefit or harm is overwhelming, precluding rigorous investigation.

# EVIDENCE

AGGREGATE EVIDENCE QUALITY	BENEFIT OR HARM PREDOMINATES	BENEFIT AND HARM BALANCED
<b>LEVEL A</b> Intervention: Well designed and conducted trials, meta-analyses on applicable populations Diagnosis: Independent gold standard studies of applicable populations	<b>STRONG RECOMMENDATION</b>	<b>WEAK RECOMMENDATION</b> (based on balance of benefit and harm)
<b>LEVEL B</b> Trials or diagnostic studies with minor limitations; consistent findings from multiple observational studies	<b>MODERATE RECOMMENDATION</b>	<b>WEAK RECOMMENDATION</b> (based on balance of benefit and harm)
<b>LEVEL C</b> Single or few observational studies or multiple studies with inconsistent findings or major limitations.	<b>WEAK RECOMMENDATION</b> (based on low quality evidence)	<b>No recommendation may be made.</b>
<b>LEVEL D</b> Expert opinion, case reports, reasoning from first principles	<b>WEAK RECOMMENDATION</b> (based on low quality evidence)	<b>No recommendation may be made.</b>
<b>LEVEL X</b> Exceptional situations where validating studies cannot be performed and there is a clear preponderance of benefit or harm	<b>STRONG RECOMMENDATION</b> <b>MODERATE RECOMMENDATION</b>	

**KEY ACTION STATEMENTS (KAS)  
THE EVALUATION, DIAGNOSIS,  
TREATMENT, AND MONITORING  
OF CHILDREN AND ADOLESCENTS  
WITH ADHD**

## **KAS I**

**The pediatrician or other primary care clinician should initiate an evaluation for ADHD for any child or adolescent age 4 years to the 18<sup>th</sup> birthday who presents with academic or behavioral problems and symptoms of inattention, hyperactivity, or impulsivity.**

- Evidence Quality: Grade B
- Strength of Recommendation: Strong Recommendation



## KAS 2

To make a diagnosis of ADHD, the primary care clinician should determine that *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* criteria have been met, including documentation of symptoms and impairment in more than one major setting (ie, social, academic, or occupational), with information obtained primarily from reports from parents or guardians, teachers, other school personnel, and mental health clinicians who are involved in the child or adolescent's care. The primary care clinician should also rule out any alternative cause.

- Evidence Quality: Grade B
- Strength of Recommendation: Strong

## KAS 3

**In the evaluation of a child or adolescent for ADHD, the primary care clinician should include a process to at least screen for comorbid conditions, including emotional or behavioral conditions (eg, anxiety, depression, oppositional defiant disorder, conduct disorders, substance use), developmental conditions (eg, learning and language disorders, autism spectrum disorders), and physical conditions (eg, tics, sleep apnea).**

- Evidence Quality: Grade B
- Strength of Recommendation: Strong

## KAS 4

**ADHD is a chronic condition; therefore, the primary care clinician should manage children and adolescents with ADHD in the same manner that they would children and youth with special health care needs, following the principles of the chronic care model and the medical home.**

- Evidence Quality: Grade B
- Strength of Recommendation: Strong

## KAS 5A

**For preschool-aged children (age 4 years to the 6<sup>th</sup> birthday) with ADHD, the primary care clinician should prescribe evidence-based parent training in behavior management (PTBM) and/or behavioral classroom interventions as the first line of treatment, if available.**

- Evidence Quality: Grade A
- Strength of Recommendation: Strong for PTBM

## KAS 5A

**For preschool-aged children (age 4 years to the 6<sup>th</sup> birthday) with ADHD, the primary care clinician should prescribe evidence-based parent training in behavior management (PTBM) and/or behavioral classroom interventions as the first line of treatment, if available.**

- Evidence Quality: Grade A
- Strength of Recommendation: Strong for PTBM

**Methylphenidate may be considered if these behavioral interventions do not provide significant improvement and there is moderate to severe continued disturbance in the 4- through 5-year-old child's functioning. In areas where evidence-based behavioral treatments are not available, the clinician needs to weigh the risks of starting medication before the age of 6 years against the harm of delaying treatment.**

- Evidence Quality: Grade B
- Strength of Recommendation: Strong for methylphenidate

## KAS 5B

**For elementary- and middle-school-aged children (age 6 years to the 12<sup>th</sup> birthday) with ADHD, the primary care clinician should prescribe FDA-approved medications for ADHD, along with PTBM and/or behavioral classroom intervention (preferably both PTBM and behavioral classroom interventions). Educational interventions and individualized instructional supports—including school environment, class placement, instructional placement, and behavioral supports—are a necessary part of any treatment plan and often include an Individualized Education Program (IEP) or a rehabilitation plan (504 plan).**

- Evidence Quality: Grade A
- Strength of Recommendation: Strong for medications
- Evidence Quality: Grade A
- Strength of Recommendation: Strong for for training and behavioral treatments for ADHD with family and school

## KAS 5c

**For adolescents (age 12 years to the 18<sup>th</sup> birthday) with ADHD, the primary care clinician should prescribe FDA-approved medications for ADHD with the adolescent's assent. The primary care clinician is encouraged to prescribe evidence-based training interventions and/or behavioral interventions as treatment for ADHD, if available. Educational interventions and individualized instructional supports—including school environment, class placement, instructional placement, and behavioral supports—are a necessary part of any treatment plan and often include an IEP or a rehabilitation plan (504 plan).**

- Evidence Quality: Grade A
- Strength of Recommendation: Strong for medications
- Evidence Quality: Grade A
- Strength of Recommendation: Strong for for training and behavioral treatments for ADHD with family and school

## KAS 6

**The primary care clinician should titrate doses of medication for ADHD to achieve maximum benefit with tolerable side effects.**

- Evidence Quality: Grade B
- Strength of Recommendation: Strong



## KAS 7

**The primary care clinician, if trained or experienced in diagnosing comorbid conditions, may initiate treatment for such conditions or make a referral to an appropriate subspecialist for treatment. After detecting possible co-morbid conditions, if the primary care clinician is not trained or experienced in making the diagnosis or initiating treatment, the patient should be referred to an appropriate subspecialist to make the diagnosis and initiate treatment.**

- Evidence Quality: Grade C
- Strength of Recommendation: Recommendation

**NOW WHAT?**

## PSYCHOSOCIAL TREATMENTS FOR ADHD

Some psychosocial treatments for children and adolescents with ADHD have been demonstrated to be effective: behavioral therapy and training interventions.

- Like medication treatment, the long-term positive effects of psychosocial treatments have yet to be determined
- Ongoing adherence to psychosocial treatment is a key contributor to its beneficial effects
- A chronic care model is important to ensure sustained adherence

## PSYCHOSOCIAL TREATMENTS FOR ADHD BEHAVIORAL THERAPY

Some psychosocial treatments for children and adolescents with ADHD have been demonstrated to be effective: **behavioral therapy** and training interventions.

- *Behavioral therapy involves training adults*
  - to influence the contingencies in an environment
  - to improve the behavior of a child or adolescent in that setting
- In this CPG: Parent Training in Behavior Management or PTBM
  - Grade A evidence
  - Strong recommendation

## PSYCHOSOCIAL TREATMENTS FOR ADHD BEHAVIORAL THERAPY (OR PTBM)

- Behavioral parent and classroom training are well-established treatments with preadolescent children
- PTBM can help parents and school personnel learn how to effectively prevent and respond to adolescent behaviors such as
  - interrupting
  - aggression
  - not completing tasks
  - not complying with requests

## PSYCHOSOCIAL TREATMENTS FOR ADHD BEHAVIORAL THERAPY (OR PTBM)

- Behavioral parent and classroom training are well-established treatments with preadolescent children
- The positive effects of behavioral therapies tend to persist
- In contrast, the positive effects of medication cease when medication stops

## PSYCHOSOCIAL TREATMENTS FOR ADHD TRAINING INTERVENTIONS

Some psychosocial treatments for children and adolescents with ADHD have been demonstrated to be effective: behavioral therapy and **training interventions**

- Training interventions target skill development and involve repeated practice with performance feedback over time
- Training interventions are well-established treatments to target disorganized behaviors
- Less research has been conducted of training interventions than on PTBM.

## PSYCHOSOCIAL TREATMENTS FOR ADHD INSUFFICIENT EVIDENCE

- Nonmedication treatments for ADHD-related problems with little evidence to recommend or have been found to have little or no benefit:
  - mindfulness
  - cognitive training
  - diet modification
  - electroencephalographic (EEG) biofeedback
  - supportive counseling.
  - CBD oil
  - eTENS



**HOW CAN WE HELP YOU DO  
THIS WELL?**

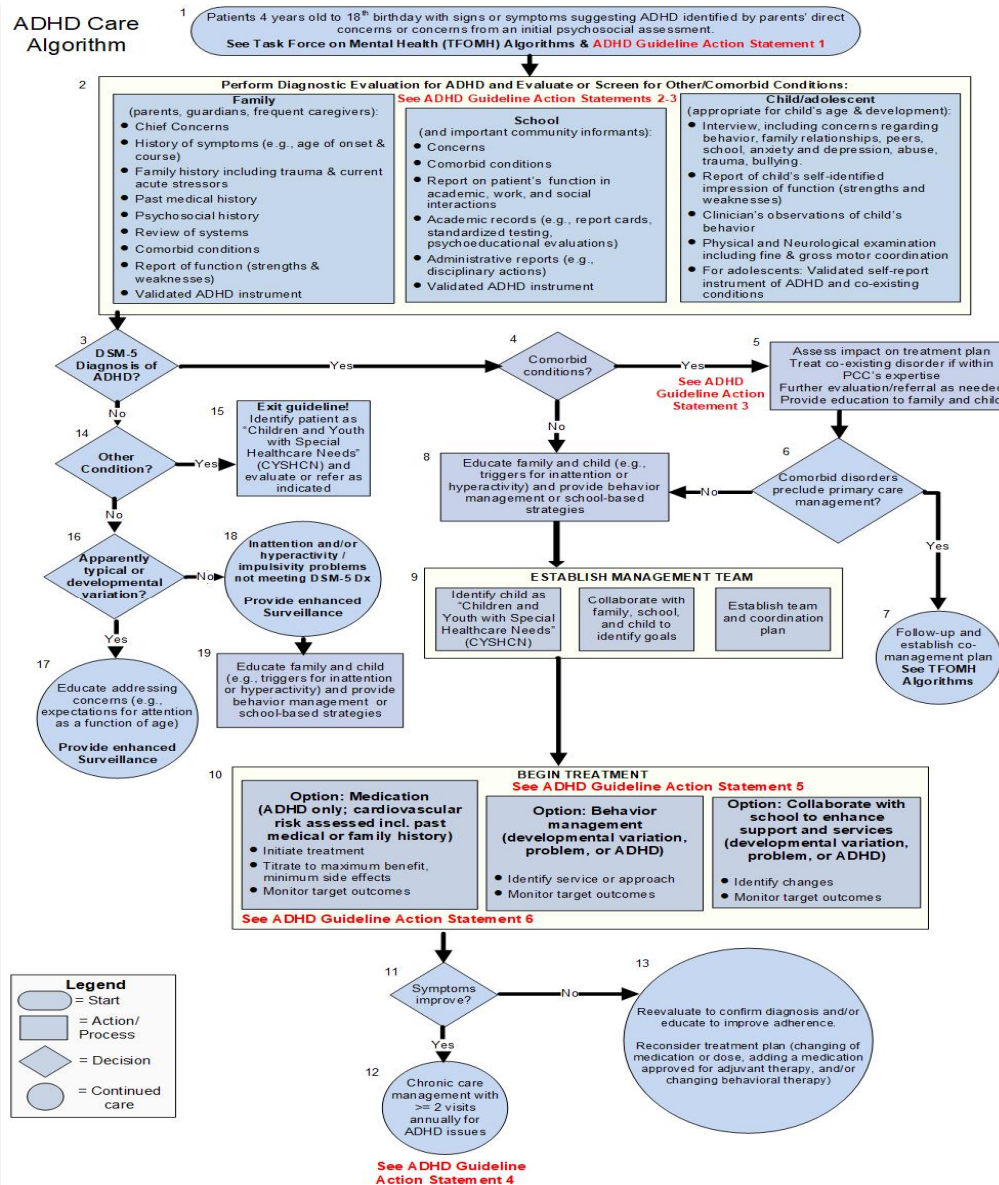
## **AAP ADHD CPG SUPPLEMENT: PROCESS OF CARE ALGORITHM**

**Implementing the Key Action Statements of the American Academy of Pediatrics' Attention-Deficit/Hyperactivity Disorder (ADHD) Clinical Practice Guidelines:**

**An Algorithm and Explanation for Process of Care for the Evaluation, Diagnosis, Treatment, and Monitoring of ADHD in Children and Adolescents**

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## ADHD Care Algorithm



## AAP ADHD CPG SUPPLEMENT: SYSTEMIC BARRIERS TO CARE

1. Limited access to care because of inadequate developmental-behavioral and mental health care training during residencies and other clinical training and shortages of consultant specialists and referral resources
2. Inadequate payment for needed services and payer coverage limitations for needed medications
3. Challenges in practice organization and staffing
4. Fragmentation of care and resulting communication barriers

## AAP ADHD CPG SUPPLEMENT: SYSTEMIC BARRIERS TO CARE

- I. Limited access to care because of inadequate developmental-behavioral and mental health care training during residencies and other clinical training and shortages of consultant specialists and referral resources
  - Limited training time in residencies
  - Limited affordable CME activities
  - Financial disincentives to specialty training
  - Not all practices embrace medical home concept and service

## AAP ADHD CPG SUPPLEMENT: SYSTEMIC BARRIERS TO THE CARE

2. Inadequate payment for needed services and payer coverage limitations for needed medications

- *Res ipsa loquitor*
- So much of this care is not face-to-face
  - Kudos to OneCareVt for its support of medical homes and care management
- Insurance limitations for ADHD medications

## AAP ADHD CPG SUPPLEMENT: SYSTEMIC BARRIERS TO THE CARE

### 3. Challenges in practice organization and staffing

- These are not sick call slots
- Diagnostic process of accumulating home and school information is often not supported
- On going communication with family, school, mental health with little or no support

## AAP ADHD CPG SUPPLEMENT: SYSTEMIC BARRIERS TO THE CARE

4. Fragmentation of care and resulting communication barriers
  - You, family, mental health, school
  - HIPPA and FERPA
  - Online communication
    - EHR contained
    - Outside of EHR



YOU CAN DO THIS!

## RESOURCES

- <https://pediatrics.aappublications.org/content/early/2019/09/26/peds.2019-2528>
- <https://www.healthychildren.org/English/health-issues/conditions/adhd/Pages/default.aspx>
- **ADHD:What Every Parent Needs to Know, 3rd Edition**  
By Mark Wolraich, MD, FAAP and Joseph F. Hagan Jr. MD, FAAP

What Every Parent Needs to Know



# ADHD

3rd Edition

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QUESTIONS?

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