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Introducing the NEW AAP Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents

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History

Die Geschichte vom Zappel-Philipp

„Ob der Philipp heute still
wohl bei Tische sitzen will?"
Also sprach in ernstem Ton
der Papa zu seinem Sohn,
und die Mutter blickte stumm
auf dem ganzen Tisch herum.
Doch der Philipp hörte nicht,
was zu ihm der Vater spricht.
Er gaukelt
und schaukelt,
er trappelt
und zappelt
auf dem Stuhle hin und her.
„Philipp, das mißfällt mir sehr!"

Seht, ihr lieben Kinder, seht,
wie's dem Philipp weiter geht!
Schaut genau auf dieses Bild.
Seht! Er schaukelt gar zu wild,
bis der Stuhl nach hinten fällt;
da ist nichts mehr, was ihn hält;

nach dem Tischtuch
greift er, schreit.
Doch was hilft's?
Zu gleicher Zeit
fallen Teller, Flasch' und Brot.
Vater ist in großer Not,
und die Mutter blicket stumm
auf dem ganzen Tisch herum.
Nun ist Philipp ganz versteckt,
und der Tisch ist abgedeckt,
was der Vater essen wollt',
unten auf der Erde rollt;
Suppe, Brot und alle Bissen,
alles ist herabgerissen;
Suppenschüssel ist entzwei,
und die Eltern stehn dabei.
Beide sind gar zornig sehr,
haben nichts zu essen mehr.

Die Geschichte vom Hans Guck-in-die-Luft

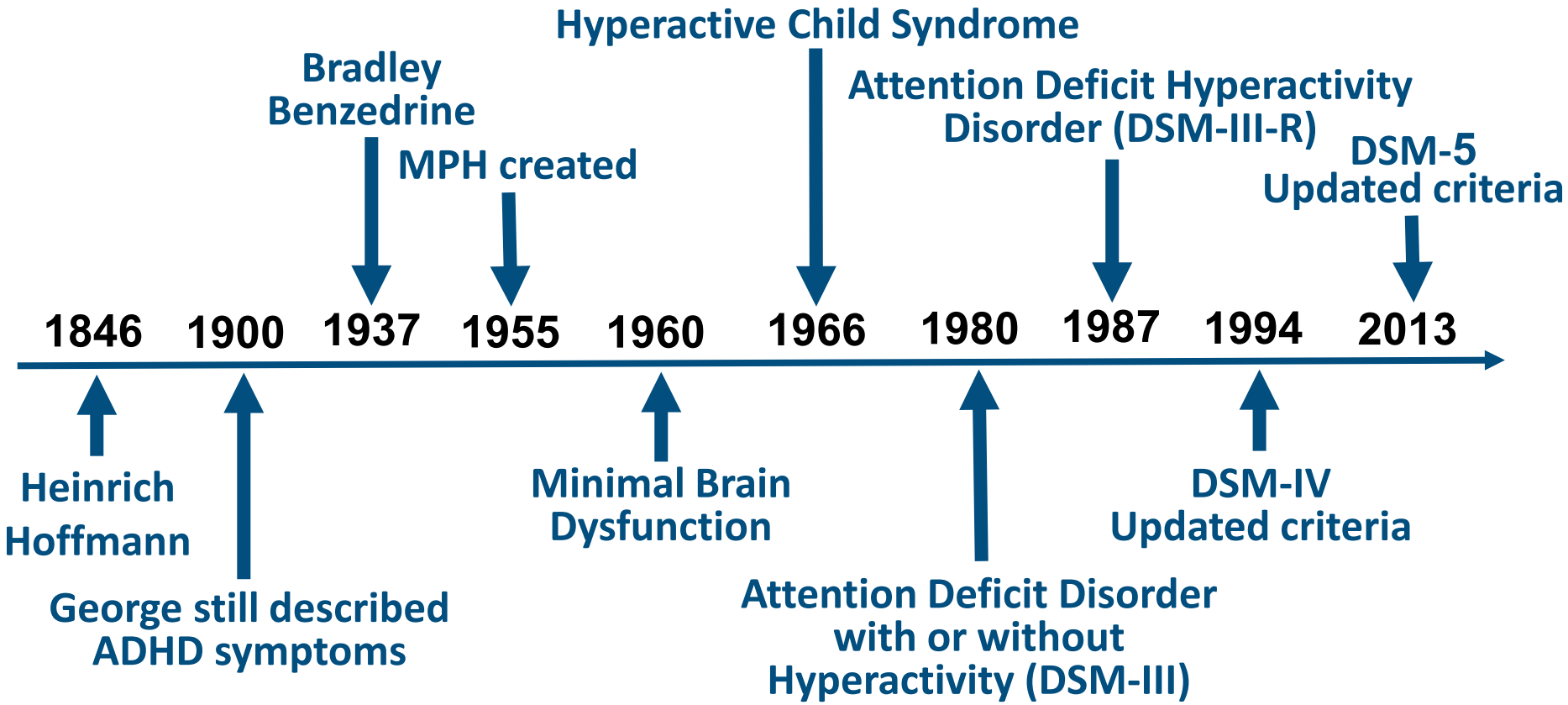
Wenn der Hans zur Schule ging,
stets sein Blick am Himmel hing.
Nach den Dächern, Wolken, Schwalben
schaut er aufwärts allenthalben:
vor die eignen Füße dicht,
ja, da sah der Bursche nicht,
also daß ein jeder ruft:
„Seht den Hans Guck-in-die-Luft!"

Kam ein Hund daher gerannt;
Hänslein blickte unverwandt
in die Luft.
Niemand ruft:
„Hans gib acht, der Hund ist nah!"
Was geschah?
Bauz! Perdauz! – da liegen zwei!
Hund und Hänschen nebenbei.

Einst ging er an Ufers Rand
mit der Mappe in der Hand.
Nach dem blauen Himmel hoch
sah er, wo die Schwalbe flog,
also daß er kerzengrad
immer mehr zum Flusse trat.
Und die Fischlein in der Reih'
sind erstaunt sehr, alle drei.

Noch ein Schritt! und plumps! der Hans
stürzt hinab kopfüber ganz! –
Die drei Fischlein, sehr erschreckt,
haben sich sogleich versteckt.

Attention-Deficit/Hyperactivity Disorder (ADHD) Historical Timeline



Constant Features of ADHD

Diagnosis: The name has changed but the symptoms have remained the same:

Name: **Minimal Brain Dysfunction ➡ Hyperactive Child Syndrome ➡ Attention Deficit Disorder ➡ Attention-Deficit/Hyperactivity Disorder**

Symptoms: **Inattention, hyperactivity, impulsivity, and frequently incoordination**

Treatment: Stimulant medications and behavior modification have had consistent strong scientific evidence for efficacy and safety since the 1970s.

Mortality, ADHD, and Psychosocial Adversity in Adults with Childhood ADHD

1. Increased risk of suicide
2. Criminal behavior
3. Incarcerations
4. Motor vehicle violations and accidents
5. Increased substance rates of comorbid disorders, particularly substance abuse

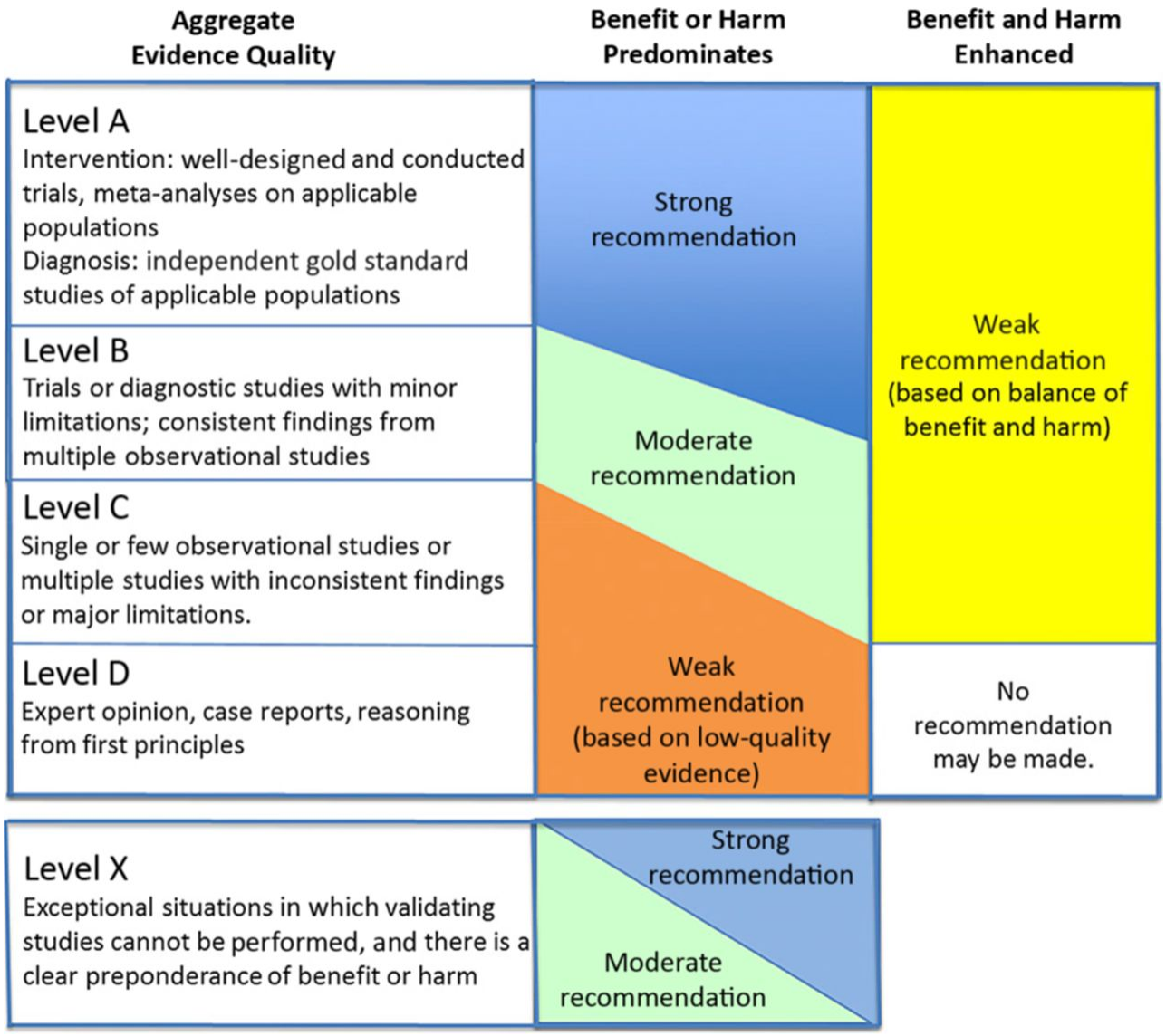
Barbaresi WJ, Colligan RC, Weaver AL, Voigt RG, Killian JM, Katusic SK. Mortality, ADHD, and psychosocial adversity in adults with childhood ADHD: a prospective study. *Pediatrics.* 2013;131(4):637–644

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 Enhanced
Level A
Intervention: well-designed and conducted trials, meta-analyses on applicable populations
Diagnosis: independent gold standard studies of applicable populations
Level B
Trials or diagnostic studies with minor limitations; consistent findings from multiple observational studies
Level C
Single or few observational studies or multiple studies with inconsistent findings or major limitations.
Level D
Expert opinion, case reports, reasoning from first principles
Strong recommendation
Moderate recommendation
Weak recommendation (based on low-quality evidence)
Weak recommendation (based on balance of benefit and harm)
No recommendation may be made.
Level X
Exceptional situations in which validating studies cannot be performed, and there is a clear preponderance of benefit or harm
Strong recommendation
Moderate recommendation

Revisions in the New Guidelines

1. The guidelines include three papers
   A. Clinical Guidelines
   B. Process of Care Algorithm
   C. Barriers to Implementing the Guidelines

Clinical Guidelines

1. Diagnosis should be based on the *Diagnostic and Statistical Manual of Mental Disorders,* Fifth Edition (DSM-5).

Changes from DSM-IV:

A. For children over 17 years of age, 5 instead of 6 positive behaviors in either dimension are required.
B. Symptoms need to have been present from at least 12 years of age instead of 7 years.

Evaluation Entails

1. Identifying core symptoms
2. Assessing impairment
3. Identifying possible underlying or alternative causes
4. Identifying co-occurring (co-morbid) conditions

DSM-5 Core Symptoms of Inattention

- Manifestations of the following symptoms must occur often*

Inattention

- Careless
- Difficulty sustaining attention in activity
- Doesn't listen
- No follow-through
- Avoids/dislikes tasks requiring sustained mental effort
- Can't organize
- Loses important items
- Easily distractible
- Forgetful in daily activities

*Must have 6 or more symptoms for at least 6 months to a degree that is maladaptive and inconsistent with developmental level.

Regier DA, Narrow WE, Clarke DE, et al. DSM-5 field trials in the United States and Canada, Part II: test-retest reliability of selected categorical diagnoses. *Am J Psychiatry.* 2013;170(1):59–70

DSM-5 Core Symptoms of Hyperactivity-Impulsivity

- Manifestations of the following symptoms must occur often*

Hyperactivity

- Squirms and fidgets
- Can't stay seated
- Runs/climbs excessively
- Can't play/work quietly
- "On the go"/"driven by a motor"
- Talks excessively

Impulsivity

- Blurts out answers
- Can't wait turn
- Intrudes/interrupts others

*Must have 6 or more symptoms for at least 6 months to a degree that is maladaptive and inconsistent with developmental level.

Regier DA, Narrow WE, Clarke DE, et al. DSM-5 field trials in the United States and Canada, Part II: test-retest reliability of selected categorical diagnoses. *Am J Psychiatry.* 2013;170(1):59–70

Assess Function

- Academic Performance
- Peer Relations
- Sibling Relations
- Parent Relations
- Community Activities

DSM-5 ADHD Diagnostic Criteria

- List of core symptoms must be present for past 6 months.
- Several symptoms need to be present before 12 years of age.
- Several inattentive or hyperactive-impulsive symptoms must be present in 2 or more settings (e.g., school and home).
- There needs to be clear evidence that the symptoms interfere with or reduce the quality of social, academic, or occupational functioning.
- Other mental or medical disorders need to be excluded as the cause of the core symptoms.

Regier DA, Narrow WE, Clarke DE, et al. DSM-5 field trials in the United States and Canada, Part II: test-retest reliability of selected categorical diagnoses. *Am J Psychiatry.* 2013;170(1):59–70

DSM-5 Subtypes of ADHD

- Predominantly inattentive
- Predominantly hyperactive-impulsive
- Combined
- Not otherwise specified

Preschool Age Diagnostic Issues

- The same criteria are pertinent for preschool age children but more difficult to find qualified observers.
- It may be difficult to get reports in more than one setting.

Greenhill L, Kollins S, Abikoff H, et al. (2006). Efficacy and safety of immediate-release methylphenidate treatment for preschoolers with ADHD. *J Am Acad Child Adolesc Psychiatry.* 2006;45(11):1284–1293

Adolescent Diagnostic Issues

- Much more difficult to get adequate observers; both parents and teachers have less opportunity to observe them.
- The risk of substance abuse is higher and must be ruled out before a diagnosis can be made.
- The occurrence of co-morbid conditions, particularly anxiety or depression, is more frequent.

Wolraich ML, Wibbelsman CJ, Brown TE, et al. Attention-deficit/hyperactivity disorder among adolescents: a review of the diagnosis, treatment, and clinical implications. *Pediatrics.* 2005;115(6):1734–1746

Diagnostic Process

The use of ADHD-specific rating scales is clinically helpful in the evaluation of ADHD.

Assessment Should Include Information from Parents, Teachers, and Patients

- ADHD-based rating scales from parents and teachers provide measurable information for diagnosis and treatment.
- Interviews help to clarify observed behavior and detect alternative and/or comorbid diagnoses.
- Observations provide further information about behaviors and parent-child interactions.

Vanderbilt ADHD Diagnostic Parent Rating Scale

Child Study Center
Department of Pediatrics
University of Oklahoma Health Sciences Center

Child's Name: _____ **Parent's Name:** _____

Today's Date: _____ **Date of Birth:** _____ **Age:** _____

Directions: Each rating should be considered in the context of what is appropriate for the age of your child.

When completing this form, please think about your child's behaviors in the past 6 months.

Is this evaluation based on a time when the child: ☐ was on medication ☐ was not on medication ☐ not sure

Behavior:	Never	Occasionally	Often	Very Often
1. Does not pay attention to details or makes careless mistakes with, for example, homework	0	1	2	3
2. Has difficulty keeping attention to what needs to be done	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Does not follow through when given directions and fails to finish activities (not due to refusal or failure to understand)	0	1	2	3
5. Has difficulty organizing tasks and activities	0	1	2	3
6. Avoids, dislikes, or does not want to start tasks that require ongoing mental effort	0	1	2	3
7. Loses things necessary for tasks or activities (toys, assignments, pencils, books)	0	1	2	3
8. Is easily distracted by noises or other stimuli	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Leaves seat when remaining seated is expected	0	1	2	3
12. Runs about or climbs too much when remaining seated is expected	0	1	2	3
13. Has difficulty playing or beginning quiet play games	0	1	2	3
14. Is "on the go" or often acts as if "driven by a motor"	0	1	2	3
15. Talks too much	0	1	2	3
16. Blurts out answers before questions have been completed	0	1	2	3
17. Has difficulty waiting his or her turn	0	1	2	3
18. Interrupts or intrudes in on others' conversations and/or activities	0	1	2	3
19. Argues with adults	0	1	2	3
20. Loses temper	0	1	2	3
21. Actively defies or refuses to go along with adults' requests or rules	0	1	2	3
22. Deliberately annoys people	0	1	2	3
23. Blames others for his or her mistakes or misbehaviors	0	1	2	3
24. Is touchy or easily annoyed by others	0	1	2	3
25. Is angry or resentful	0	1	2	3
26. Is spiteful and wants to get even	0	1	2	3
27. Bullies, threatens, or intimidates others	0	1	2	3
28. Starts physical fights	0	1	2	3
29. Lies to get out of trouble or to avoid obligations (ie, "cons" others)	0	1	2	3
30. Is truant from school (skips school) without permission	0	1	2	3
31. Is physically cruel to people	0	1	2	3
32. Has stolen things that have value	0	1	2	3
33. Deliberately destroys others' property	0	1	2	3

Vanderbilt ADHD Diagnostic Parent Rating Scale, Continued

Child's Name: _____ **Parent's Name:** _____

Today's Date: _____ **Date of Birth:** _____ **Age:** _____

Behavior:	Never	Occasionally	Often	Very Often
34. Has used a weapon that can cause serious harm (bat, knife, brick, gun)	0	1	2	3
35. Is physically cruel to animals	0	1	2	3
36. Has deliberately set fires to cause damage	0	1	2	3
37. Has broken into someone else's home, business, or car	0	1	2	3
38. Has stayed out at night without permission	0	1	2	3
39. Has run away from home overnight	0	1	2	3
40. Has forced someone into sexual activity	0	1	2	3
41. Is fearful, anxious, or worried	0	1	2	3
42. Is afraid to try new things for fear of making mistakes	0	1	2	3
43. Feels worthless or inferior	0	1	2	3
44. Blames self for problems, feels guilty	0	1	2	3
45. Feels lonely, unwanted, or unloved; complains that "no one loves him or her"	0	1	2	3
46. Is sad, unhappy, or depressed	0	1	2	3
47. Is self-conscious or easily embarrassed	0	1	2	3

Academic & Social Performance:	Excellent	Above Average	Average	Somewhat of a Problem	Problematic
48. Overall school performance	1	2	3	4	5
49. Reading	1	2	3	4	5
50. Writing	1	2	3	4	5
51. Mathematics	1	2	3	4	5
52. Relationship with parents	1	2	3	4	5
53. Relationship with siblings	1	2	3	4	5
54. Relationship with peers	1	2	3	4	5
55. Participation in organized activities (eg, teams)	1	2	3	4	5

Tic Behaviors: To the best of your knowledge, please indicate if this child displays the following behaviors:

1. **Motor Tics:** Rapid, repetitive movements such as eye-blinking grimacing, nose twitching, head jerks, shoulder shrugs, arm jerks, body jerks, rapid kicks.

☐ No tics present. ☐ Yes, they occur nearly every day, but go unnoticed by most people. ☐ Yes, noticeable tics occur nearly every day.

2. **Phonic (Vocal) Tics:** Repetitive noises including but not limited to throat clearing, coughing, whistling, sniffing, snorting, screeching, barking, grunting, repetition of words or short phrases.

☐ No tics present. ☐ Yes, they occur nearly every day, but go unnoticed by most people. ☐ Yes, noticeable tics occur nearly every day.

3. If **YES** to 1 or 2, Do these tics interfere with the child's activities (like reading, writing, walking, talking, or eating?

☐ No ☐ Yes

Previous Diagnosis and Treatment: To the best of your knowledge, please answer the following questions:

1. Has the child been diagnosed with ADHD or ADD?	☐ No	☐ Yes
2. Is he/she on medication for ADHD or ADD?	☐ No	☐ Yes
3. Has the child been diagnosed with a Tic Disorder or Tourette's Disorder?	☐ No	☐ Yes
4. Is he/she on medication for a Tic Disorder or Tourette's Disorder?	☐ No	☐ Yes

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DEVELOPMENTAL-BEHAVIORAL PEDIATRICS

Total number of questions scored 2 or 3 in questions 1-9: ____
Total number of questions scored 2 or 3 in questions 10-18: ____
Total symptom score for questions 1-18: ____
Total number of questions scored 2 or 3 in questions 19-26: ____
Total number of questions scored 2 or 3 in questions 27-40: ____
Total number of questions scored 2 or 3 in questions 41-47: ____
Total number of questions scored 2 or 3 in questions 48-55: ____
Average Performance Score: ____

Child Study Center
Department of Pediatrics
University of Oklahoma Health Sciences Center
Phone: 271-6700•Fax: 405 271-8535

Vanderbilt ADHD Follow-Up Parent Rating Scale

Child's Name: _____ Parent's Name: _____

Today's Date: _____ Date of Birth: _____ Age: _____

Directions: Each rating should be considered in the context of what is appropriate for the age of your child.

When completing this form, please think about your child's behaviors since you last rated their behavior.

Is this evaluation based on a time when the child: ☐ was on medication ☐ was not on medication ☐ not sure

Behavior:	Never	Occasionally	Often	Very Often
1. Does not pay attention to details or makes careless mistakes with, for example, homework	0	1	2	3
2. Has difficulty keeping attention to what needs to be done	0	1	2	3
3. Does not seem to listen when spoken to directly	0	1	2	3
4. Does not follow through when given directions and fails to finish activities (not due to refusal or failure to understand)	0	1	2	3
5. Has difficulty organizing tasks and activities	0	1	2	3
6. Avoids, dislikes, or does not want to start tasks that require ongoing mental effort	0	1	2	3
7. Loses things necessary for tasks or activities (toys, assignments, pencils, books)	0	1	2	3
8. Is easily distracted by noises or other stimuli	0	1	2	3
9. Is forgetful in daily activities	0	1	2	3
10. Fidgets with hands or feet or squirms in seat	0	1	2	3
11. Leaves seat when remaining seated is expected	0	1	2	3
12. Runs about or climbs too much when remaining seated is expected	0	1	2	3
13. Has difficulty playing or beginning quiet play games	0	1	2	3
14. Is "on the go" or often acts as if "driven by a motor"	0	1	2	3
15. Talks too much	0	1	2	3
16. Blurts out answers before questions have been completed	0	1	2	3
17. Has difficulty waiting his or her turn	0	1	2	3
18. Interrupts or intrudes in on others' conversations and/or activities	0	1	2	3
19. Argues with adults	0	1	2	3
20. Loses temper	0	1	2	3
21. Actively defies or refuses to go along with adults' requests or rules	0	1	2	3
22. Deliberately annoys people	0	1	2	3
23. Blames others for his or her mistakes or misbehaviors	0	1	2	3
24. Is touchy or easily annoyed by others	0	1	2	3
25. Is angry or resentful	0	1	2	3
26. Is spiteful and wants to get even	0	1	2	3

Academic & Social Performance	Excellent	Above Average	Average	Somewhat of A Problem	Problematic
1. Overall school performance	1	2	3	4	5
2. Reading	1	2	3	4	5
3. Writing	1	2	3	4	5
4. Mathematics	1	2	3	4	5
5. Relationship with parents	1	2	3	4	5
6. Relationship with siblings	1	2	3	4	5
7. Relationship with peers	1	2	3	4	5
8. Participation in organized activities (eg. teams)	1	2	3	4	5

Vanderbilt ADHD Follow-Up Parent Rating Scale, Continued
Pittsburgh Side Effects Rating Scale

Child's Name: _____ Parent's Name: _____

Today's Date: _____ Date of Birth: _____ Age: _____

Directions: Listed below are several possible negative effects (side effects) that medication may have on a child with ADHD. Please read each item carefully and use the boxes to rate the severity of your child's side effects since he/she has been on his/her current dose of medication. When requested, or whenever you feel it would be useful for us to know, please describe the side effects that you observed or any other unusual behavior in the "Comments" section below.

Use the following to assess severity:

None: The symptom is not present.

Mild: The symptom is present but is not significant enough to cause concern to your child, to you, or to his/her friends. Presence of the symptom at this level would NOT be a reason to stop taking the medicine.

Moderate: The symptom causes impairment of functioning or social embarrassment to such a degree that the negative impact on social and school performance should be weighed carefully to justify benefit of continuing medication.

Severe: The symptom causes impairment of functioning or social embarrassment to such a degree that the child should not continue to receive this medication or dose of medication as part of current treatment.

Side Effect:	None	Mild	Moderate	Severe
Headache				
Stomachache				
Change of appetite-explain below				
Trouble of sleeping				
Irritability in the late morning, late afternoon, or evening-explain below				
Socially withdrawn – decreased interaction with others				
Extreme sadness or unusual crying				
Dull, tired, listless behavior				
Tremors/feeling shaky				
Repetitive movements, tics, jerking, twitching, eye blinking-explain below				
Picking at skin or fingers, nail biting, lip or cheek chewing – describe below				
Sees or hears things that aren't there				

Comments:

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DEVELOPMENTAL-BEHAVIORAL PEDIATRICS

The Vanderbilt Scales

- Available at:
  - Sooner Success: https://soonersuccess.ouhsc.edu
    - Click “Resources” in top menu bar.
    - Click “Behavior Rating Scales” in drop-down menu.

ADHD Guideline Recommendations

Evaluation of children with ADHD should include assessment for coexisting conditions.

Co-morbidity
(Conditions Commonly Co-occurring with ADHD)

- Disruptive Behavior Disorders
  - Oppositional Defiant Disorder
  - Conduct Disorder
- Depressive Disorders
- Anxiety Disorders
- Cognitive Disorders
  - Learning Disabilities
  - Language Disorders
- Motor Disorders
  - Developmental Coordination Disorder
  - Tic Disorders (Tourette's)

Rating Scale Screens for Anxiety and Depression

- Anxiety: Screen for Child Anxiety Related Disorders (SCARED)
- Depression: Patient Health Questionnaire Modified for Teens (PHQ-9)
- Child and Adolescent Trauma Screen (CATS)

Treating ADHD as a Chronic Condition

- Need to educate parents and patients about ADHD
- Need to develop a partnership with the family
- Need to develop a management plan with specific targeted goals
- If at all possible, include the teachers
- Requires ongoing monitoring and anticipation of developmental changes

Elementary School–Aged Children (6–11 years)

A. Prescribe US FDA–approved medications for ADHD A/strong recommendation

B. and/or evidence-based parent and/or teacher-administered behavior therapy as treatment for ADHD B/strong recommendation

C. Preferably both

ADHD Guideline Recommendations

The clinician should titrate doses of medication for ADHD to achieve maximum benefit with minimum adverse effects. B/strong recommendation

Medications

- Stimulant Medications: methylphenidate and amphetamines—First Line
- Selective Norepinephrine Reuptake Inhibitor: atomoxetine—Second Line
- Alpha Adrenergic Agents: guanfacine and clonidine—Second Line and also Adjunctive

Why Use Behavioral Treatment for ADHD?

- Has been shown to be effective
- Family may not want to utilize stimulant medications
- Reduces residual symptoms of ADHD
- Makes pharmacologic therapy more effective
- May reduce amount of medication required
- Parent satisfaction is high

Behavioral Interventions

- Reward system
- Time out
- Social reinforcement
- Modeling
- Group problem-solving
- Sports skills
- Social skills training

General Classroom Interventions

- Ensure structure and predictable routines.
- Employ cost-response token economy systems.
- Use daily report cards.
- Teach organizational and work/study skills.

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 (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 on 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
- Cannabidiol (CBD) oil
- eTNS

Appropriate Care Requires:

- Communication between families and clinicians other than just in office visits
- Communication between clinicians and school personnel
- Communication between primary care and mental health clinicians

Summary

- ADHD is a real condition with extensive research about its diagnosis and treatment.
- Underdiagnosis and treatment is the more frequent situation than overtreatment, effective, and safe treatments for ADHD.
- For effective treatment, need to consider it as a chronic illness that requires ongoing treatment with appropriate titration and ongoing monitoring to remain effective.

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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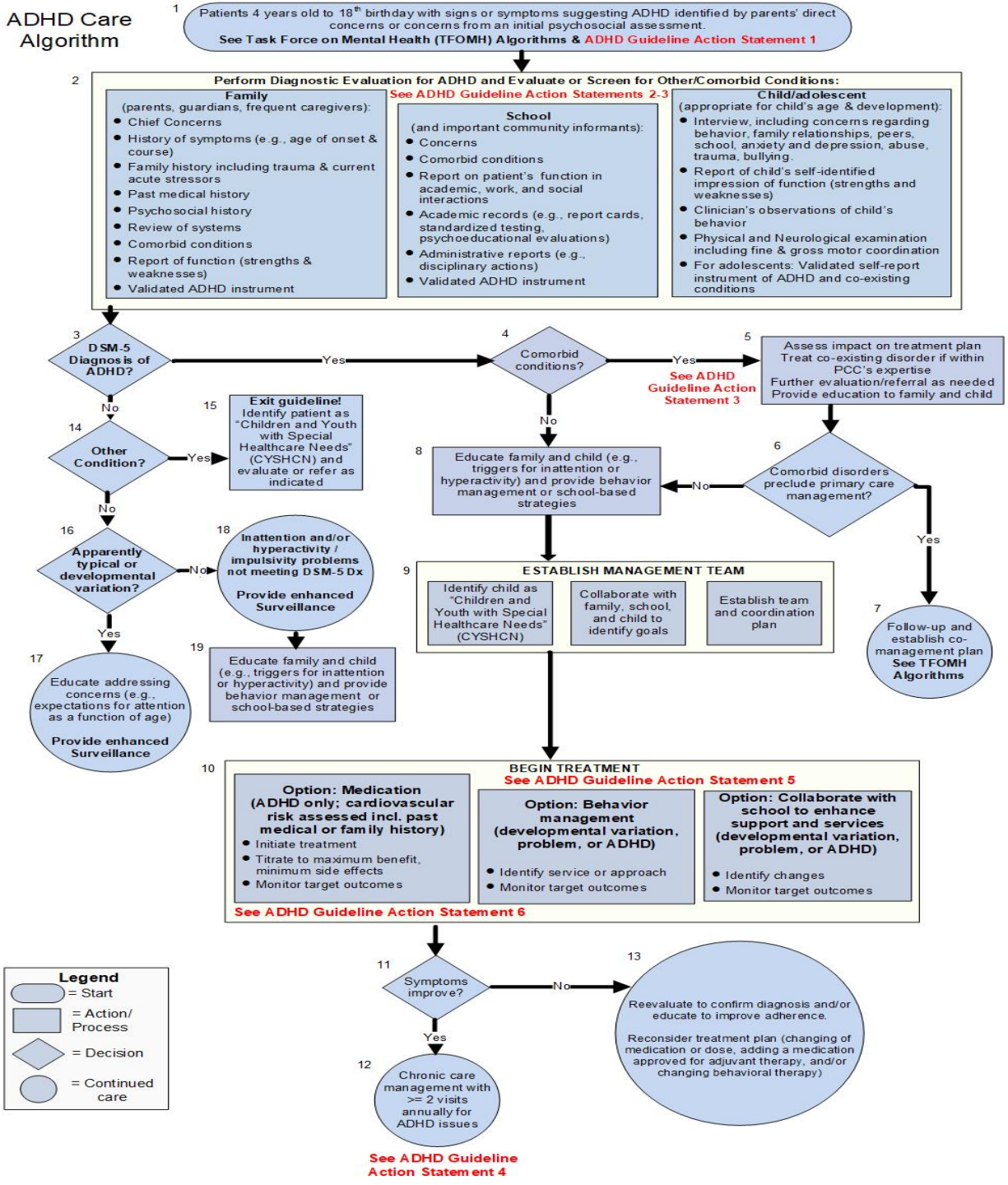
You've reviewed the guidelines. Now what?

How can we help you do this well?

AAP ADHD Clinical Practice Guideline Supplement: Process of Care Algorithm

Implementing the Key Action Statements of the AAP ADHD Clinical Practice Guideline:

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


ADHD Care Algorithm
1
Patients 4 years old to 18th birthday with signs or symptoms suggesting ADHD identified by parents' direct concerns or concerns from an initial psychosocial assessment.
See Task Force on Mental Health (TFOMH) Algorithms & ADHD Guideline Action Statement 1
2
Perform Diagnostic Evaluation for ADHD and Evaluate or Screen for Other/Comorbid Conditions:
See ADHD Guideline Action Statements 2-3
Family
(parents, guardians, frequent caregivers):
Chief Concerns
History of symptoms (e.g., age of onset & course)
Family history including trauma & current acute stressors
Past medical history
Psychosocial history
Review of systems
Comorbid conditions
Report of function (strengths & weaknesses)
Validated ADHD instrument
School
(and important community informants):
Concerns
Comorbid conditions
Report on patient's function in academic, work, and social interactions
Academic records (e.g., report cards, standardized testing, psychoeducational evaluations)
Administrative reports (e.g., disciplinary actions)
Validated ADHD instrument
Child/adolescent
(appropriate for child's age & development):
Interview, including concerns regarding behavior, family relationships, peers, school, anxiety and depression, abuse, trauma, bullying.
Report of child's self-identified impression of function (strengths and weaknesses)
Clinician's observations of child's behavior
Physical and Neurological examination including fine & gross motor coordination
For adolescents: Validated self-report instrument of ADHD and co-existing conditions
3
DSM-5 Diagnosis of ADHD?
Yes
No
4
Comorbid conditions?
Yes
No
5
Assess impact on treatment plan
Treat co-existing disorder if within PCC's expertise
Further evaluation/referral as needed
Provide education to family and child
See ADHD Guideline Action Statement 3
6
Comorbid disorders preclude primary care management?
No
Yes
7
Follow-up and establish co-management plan
See TFOMH Algorithms
8
Educate family and child (e.g., triggers for inattention or hyperactivity) and provide behavior management or school-based strategies
9
ESTABLISH MANAGEMENT TEAM
Identify child as "Children and Youth with Special Healthcare Needs" (CYSHCN)
Collaborate with family, school, and child to identify goals
Establish team and coordination plan
10
BEGIN TREATMENT
See ADHD Guideline Action Statement 5
Option: Medication (ADHD only; cardiovascular risk assessed incl. past medical or family history)
Initiate treatment
Titrate to maximum benefit, minimum side effects
Monitor target outcomes
Option: Behavior management (developmental variation, problem, or ADHD)
Identify service or approach
Monitor target outcomes
Option: Collaborate with school to enhance support and services (developmental variation, problem, or ADHD)
Identify changes
Monitor target outcomes
See ADHD Guideline Action Statement 6
11
Symptoms improve?
No
Yes
12
Chronic care management with >= 2 visits annually for ADHD issues
See ADHD Guideline Action Statement 4
13
Reevaluate to confirm diagnosis and/or educate to improve adherence.
Reconsider treatment plan (changing of medication or dose, adding a medication approved for adjuvant therapy, and/or changing behavioral therapy)
14
Other Condition?
Yes
No
15
Exit guideline!
Identify patient as "Children and Youth with Special Healthcare Needs" (CYSHCN) and evaluate or refer as indicated
16
Apparently typical or developmental variation?
No
Yes
17
Educate addressing concerns (e.g., expectations for attention as a function of age)
Provide enhanced Surveillance
18
Inattention and/or hyperactivity / impulsivity problems not meeting DSM-5 Dx
Provide enhanced Surveillance
19
Educate family and child (e.g., triggers for inattention or hyperactivity) and provide behavior management or school-based strategies
Legend
= Start
= Action/ Process
= Decision
= Continued care

AAP ADHD Clinical Practice Guideline 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 Clinical Practice Guideline 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
   - 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 Clinical Practice Guideline Supplement: Systemic Barriers to 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
   - New accountable care organizations (ACO) models must account for care coordination!
   - Insurance limitations for ADHD medications

AAP ADHD Clinical Practice Guideline Supplement: Systemic Barriers to 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.
   - Ongoing communication with family, school, mental health with little or no support

AAP ADHD Clinical Practice Guideline Supplement: Systemic Barriers to Care

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

You can do this!

Resources

- Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents – https://pediatrics.aappublications.org/content/144/4/e20192528

- *ADHD: What Every Parent Needs to Know*, 3rd Edition by Mark Wolraich, MD, FAAP and Joseph F. Hagan Jr. MD, FAAP – https://shop.aap.org/ADHD-Paperback

- HealthyChildren.org – https://www.healthychildren.org/English/health-issues/conditions/adhd/Pages/default.aspx

CLINICAL PRACTICE GUIDELINE

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents

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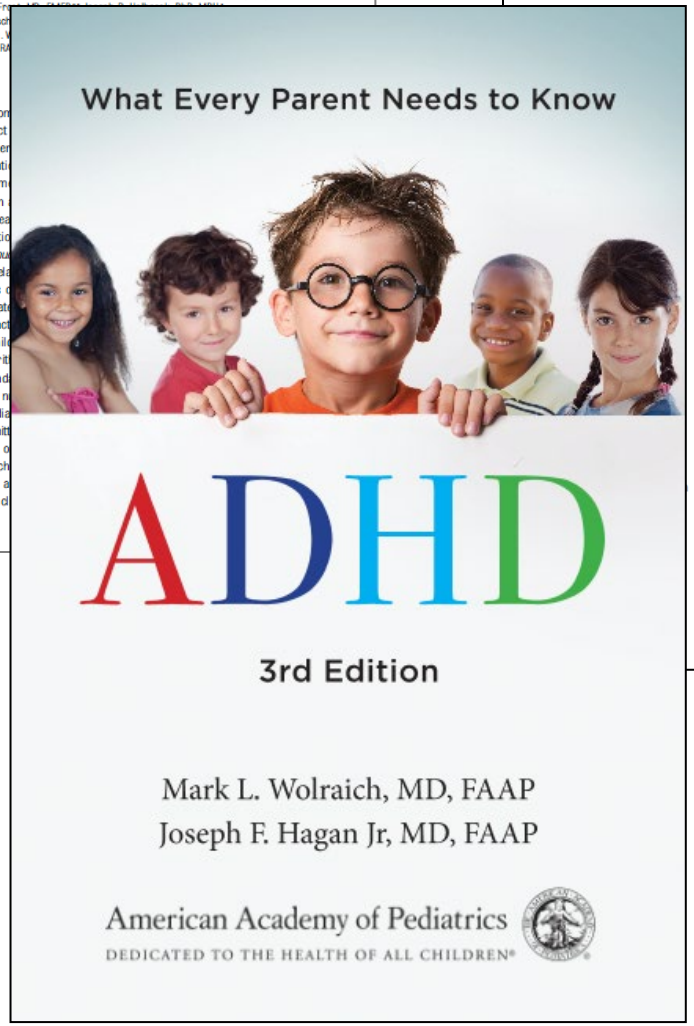
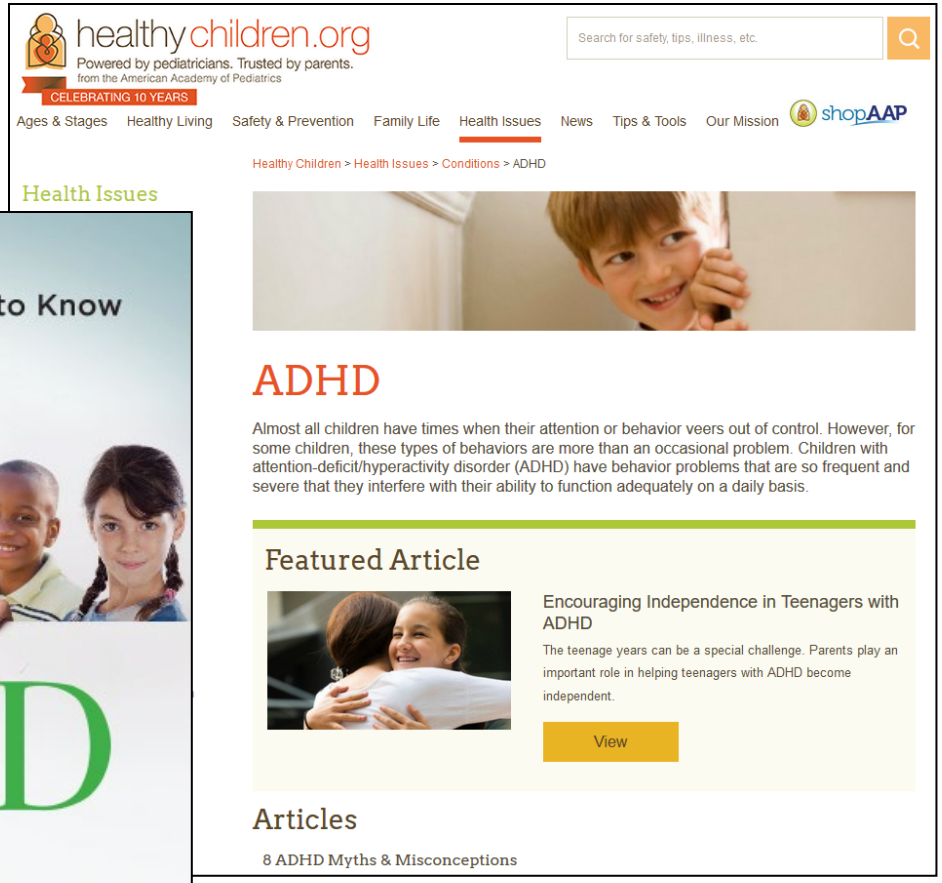
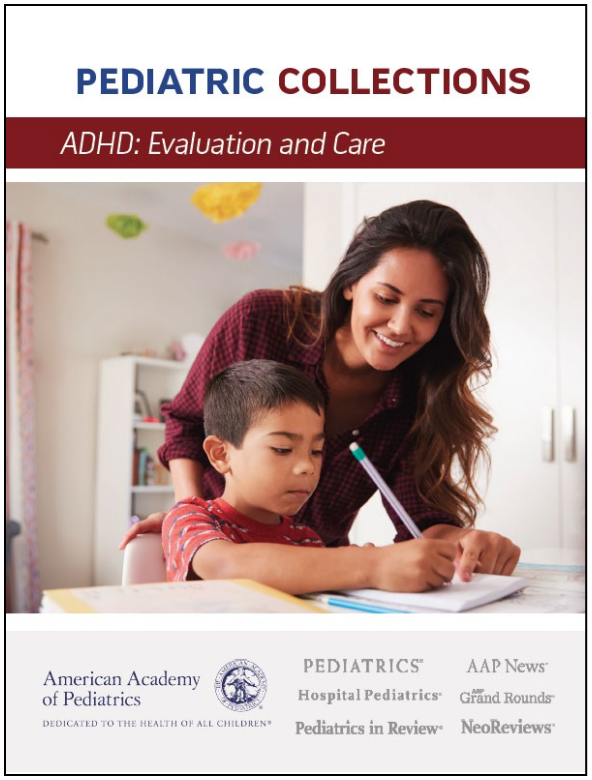
ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERA...

Attention-deficit/hyperactivity disorder (ADHD) is 1 of the most com... neurobehavioral disorders of childhood and can profoundly affect ... academic achievement, well-being, and social interactions. The Amer... of Pediatrics first published clinical recommendations for evaluati... diagnosis of pediatric ADHD in 2000; recommendations for treatm... in 2001. The guidelines were revised in 2011 and published with an ... process of care algorithm (PoCA) providing discrete and manage... which clinicians could fulfill the clinical guideline's recommendati... release of the 2011 guideline, the *Diagnostic and Statistical Manu... Disorders* has been revised to the fifth edition, and new ADHD-rela... has been published. These publications do not support dramatic ... the previous recommendations. Therefore, only incremental updat... made in this guideline revision, including the addition of a key act... related to diagnosis and treatment of comorbid conditions in chil... adolescents with ADHD. The accompanying process of care algorit... been updated to assist in implementing the guideline recommend... Throughout the process of revising the guideline and algorithm, n... systemic barriers were identified that restrict and/or hamper pedia... ability to adopt their recommendations. Therefore, the subcommitt... a companion article (available in the Supplemental Information) o... barriers to the care of children and adolescents with ADHD, which ... major systemic-level barriers and presents recommendations to a... barriers; in this article, we support the recommendations of the cl... guideline and accompanying process of care algorithm.





Other ADHD Resources From the American Academy of Pediatrics



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