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ADHD Evaluation and Diagnosis in the Primary Care Setting

Sean R. Fox

University of Vermont

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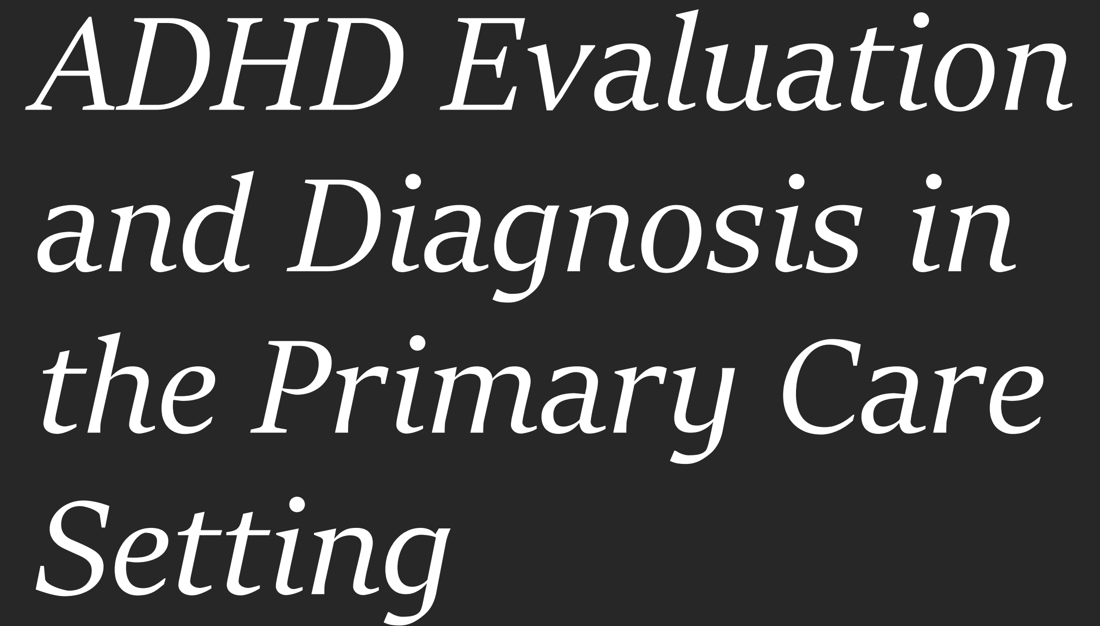


ADHD Evaluation and Diagnosis in the Primary Care Setting

Sean Fox
LIC 2021-2022
Project Mentor: Anna Hankins

Problem and Need

- According to the American Academy of Pediatrics, ADHD “is one of the most common neurobehavioral disorders of childhood and can profoundly affect children’s academic achievement, well-being, and social interactions” (Wolraich, 2019).

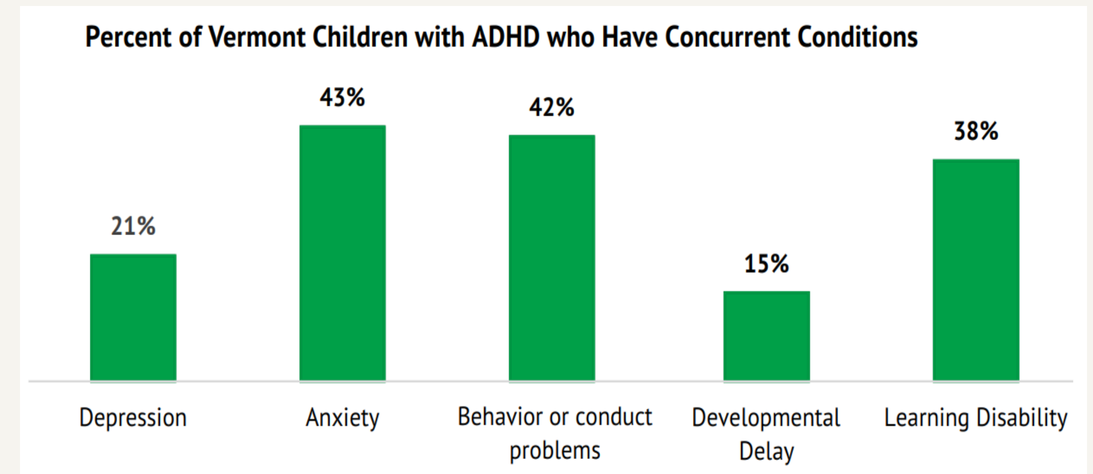
- Duration of untreated illness is estimated to be 17 years for ADHD (Oliva, 2021)

- Linked with many negative outcomes (Rettew, 2020):

  increased injuries, relationship problems and divorce, educational and vocational under-achievement, and substance abuse

Problem and Need

- National Survey of Health: approximately 1 in 10 Vermont children meet criteria (in-line with national average) (National Survey of Child Health)
- 1 in 4 children with ADHD in Vermont have endured 4 or more adverse family experiences (compared to 1 in 13 children in VT without ADHD) (NSCH)
- Children with ADHD often have additional behavioral or social-emotional health conditions (NSCH)

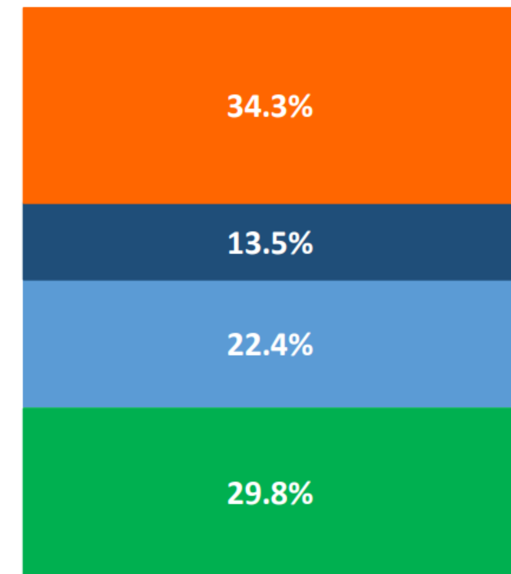


Problem and Need

- About 1 in 3 children in VT with ADHD are receiving no treatment of any kind
- Over half of children in VT with ADHD are receiving no treatment or only prescription medication

  (Rettew, 2020)

- Dr. Jeremiah Dickerson:
  - *Evaluations are booked months in advance*
  - *Waits extended after Covid-19*



Health Costs

- CDC: treatment costs + personal and societal costs = $31.6 billion

- Zhao et al.: Family burden of raising a child with ADHD

  Economic burden on families of children with ADHD ages 14-17

  - "Economic burden" excluded treatment expenses: costs related to child's behaviors and indirect costs related to caregiver strain
  - On average participants with ADHD incurred an economic burden of more than five times participants without ADHD

    ADHD = $15,036 per child, control = $2,848 per child

    (occupational and socio-economic burden)

Community Perspective

- Jeremiah E. Dickerson, MD, Child Psychiatrist

  - Describe what an evaluation looks like for a child psychiatrist
  - What is reasonable to accomplish in a PCP visit
  - Key is to assess for **comorbidities** as they often need additional support
  - PCPs should feel empowered to make the diagnosis without needing a psych eval

Community Perspective

- Stern Center for Language and Learning:
  Catherine Fox, M.S., CCC-SLP
  Allison Penan, M.S., CCC-SLP

  - Many presentations; not only overt hyperactivity!
  - Treatment with comorbidities is more effective with thorough evaluation
  - See a strong connection between ADHD and trauma
  - Medication is only one part of the puzzle

Intervention and Methodology

Intervention: Create a thorough and user-friendly EPIC template for evaluation of ADHD for patients ages 7-12

Methodology:

A) Review the AAP ADHD Guideline (27 pages long) & Process of Care Algorithm (28 pages)

B) Create template on Word

C) Convert to Epic template

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

Mark L. Wolraich, MD, FAAP, Joseph F. Hagan, Jr, MD, FAAP, Carla Allan, PhD, Eugenia Chan, MD, MPH, FAAP, Dale Davison, MSpEd, PCC, Marian Earls, MD, MTS, FAAP, Steven W. Evans, PhD, Susan K. Flinn, MA, Tanya Froehlich, MD, MS, FAAP, Jennifer Frost, MD, FAAFP, Joseph R. Holbrook, PhD, MPH, Christoph Ulrich Lehmann, MD, FAAP, Herschel Robert Lessin, MD, FAAP, Kymika Okechukwu, MPA, Karen L. Pierce, MD, DFAACAP, Jonathan D. Winner, MD, FAAP, William Zurhellen, MD, FAAP, SUBCOMMITTEE ON CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVE DISORDER

abstract

Attention-deficit/hyperactivity disorder (ADHD) is one of the most common neurobehavioral disorders of childhood and can profoundly affect children's academic achievement, well-being, and social interactions. The American Academy of Pediatrics first published clinical recommendations for evaluation and diagnosis of pediatric ADHD in 2000; recommendations for treatment followed in 2001. The guidelines were revised in 2011 and published with an accompanying process of care algorithm (PoCA) providing discrete and manageable steps by which clinicians could fulfill the clinical guideline's recommendations. Since the release of the 2011 guideline, the *Diagnostic and Statistical Manual of Mental Disorders* has been revised to the fifth edition, and new ADHD-related research has been published. These publications do not support dramatic changes to the previous recommendations. Therefore, only incremental updates have been made in this guideline revision, including the addition of a key action statement related to diagnosis and treatment of comorbid conditions in children and adolescents with ADHD. The accompanying process of care algorithm has also been updated to assist in implementing the guideline recommendations. Throughout the process of revising the guideline and algorithm, numerous systemic barriers were identified that restrict and/or hamper pediatric clinicians' ability to adopt their recommendations. Therefore, the subcommittee created a companion article (available in the Supplemental Information) on systemic barriers to the care of children and adolescents with ADHD, which identifies the major systemic-level barriers and presents recommendations to address those barriers; in this article, we support the recommendations of the clinical practice guideline and accompanying process of care algorithm.

*Section of Developmental and Behavioral Pediatrics, University of Oklahoma, Oklahoma City, Oklahoma; Department of Pediatrics, The Robert Larner, MD, College of Medicine, The University of Vermont, Burlington, Vermont; Hagan, Rinehart, and Connolly Pediatricians, PLLC, Burlington, Vermont; Division of Developmental and Behavioral Health, Department of Pediatrics, Children's Mercy Kansas City, Kansas City, Missouri; School of Medicine, University of Missouri-Kansas City, Kansas City, Missouri; Division of Developmental Medicine, Boston Children's Hospital, Boston, Massachusetts; Harvard Medical School, Harvard University, Boston, Massachusetts; Children and Adults with Attention-Deficit/Hyperactivity Disorder, Lanham, Maryland; Dale Davison, LLC, Skokie, Illinois; Community Care of North Carolina, Raleigh, North Carolina; School of Medicine, University of North Carolina, Chapel Hill, North Carolina; Department of Psychology, Ohio University, Athens, Ohio; Center for Intervention Research in Schools, Ohio University, Athens, Ohio; American Academy of Pediatrics, Alexandria, Virginia; Department of Pediatrics, University of Cincinnati, Cincinnati, Ohio; Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio; Swope Health Services, Kansas City, Kansas; American Academy of Family Physicians, Leawood, Kansas; National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention, Atlanta, Georgia; Departments of Biomedical Informatics and Pediatrics, Vanderbilt University, Nashville, Tennessee; The Children's Medical Group, Poughkeepsie, New York

To cite: Wolraich ML, Hagan JF, Allan C, et al. AAP SUBCOMMITTEE ON CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVE DISORDER. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*. 2019;144(4):e20192528

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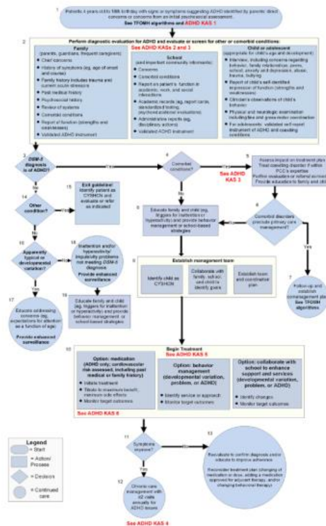

SUPPLEMENTAL FIGURE 2
ADHD care algorithm. CYSHCN, children and youth with special health care needs; TFOMH, Task Force on Mental Health.

pediatrician to best treat children with ADHD.

II. EVALUATION FOR ADHD

II a. A Child or Adolescent Presents With Signs and Symptoms Suggesting ADHD

The algorithm's steps can be implemented when a child or adolescent presents to a PCC for an assessment for ADHD. This may occur in a variety of ways.

Pediatricians and other PCCs traditionally have long-standing relationships with the child and family, which foster the opportunity to identify concerns early on. The young child may have a history of known ADHD risks, such as having parents who have been diagnosed with ADHD or having extremely low birth weight. In those instances, the PCC would monitor for emerging issues.

Many parents bring their child or adolescent to the PCC with specific concerns about the child's or adolescent's ability to sustain attention, curb activity levels, and/or inhibit impulsivity at home, school, or in the community. In many instances, the parents may express concerns about behaviors and characteristics

2

ADHD EVALUATION

SUBJECTIVE

A. HPI

Main Concerns:

Specific symptoms/when they are present:

Situations in which symptoms occur:

Age symptoms started:

Duration and pervasiveness of symptoms:

Precipitants to symptoms:

Symptoms are lessened by:

Degree to which symptoms interfere with routine and age-appropriate functioning:

B. History

Education
School:
Current grade:
Primary teacher:
Educational testing and results:
Receiving an IEP or 504 plan: (yes/no)
Receiving special education services: (yes/no)

Vanderbilt Assessment

Parent: (mom/dad/other parent)

Inattentive subtype: (positive/negative)

Hyperactive/impulsive subtype: (positive/negative)

ADHD combined inattention/hyperactivity: (positive/negative)

Oppositional defiant disorder: (positive/negative)

Conduct disorder: (positive/negative)

Anxiety/depression: (positive/negative)

Pediatric ADHD Evaluation

HPI:

Chief Concerns of Family: ***

Chief Concerns of the Child: ***

HPI - Patient presents for evaluation of ADHD.
Age of onset was age *** years old, {Desc; clinical course:11301} since that time.

Factors that make symptoms better: ***
Factors that make symptoms worse: ***

Concerning behaviors: {results adhd:15126}

Hyperactivity symptoms reported: {Descriptions; criteria adhd hyperactivity:15129}

Impulsivity symptoms reported: {Descriptions; criteria adhd impulsivity:15130}

Inattention symptoms reported: {symptoms; criteria adhd aap:15128}

Co-occurring: negative for {:15125}

Settings in which symptoms occur: ***

Prior medication trials:
{med adhd alpha agonists:312035}
{med adhd pyschostimulants:312029}

INFORMATION FROM CHILD
Child's concerns: *
How are things going at home? ***
How are things going at school? ***
How are things going with peers? ***
What are your strengths? ***
What causes you difficulty at home or school or with friends? ***
What are your goals for this visit? ****

INFORMATION FROM SCHOOL
Current grade: {Misc; education levels:33222}
Current school (if applicable): {not app:23674}
Current IEP: {YES - NO DEFAULT NO:29544}
If patient has a current IEP: Classification: {N/A:21281}
Results of standardized testing: ***
Previous psychoeducational testing: ***
Current 504 Plan: {YES/NO:24278}
Educational status: {educational hx:23312}
Educational interventions: {educational interventions:23315}
Attendance Difficulties: {YES **_NO:22393}
Previous Grade Retentions: {YES **_NO:22393}
Suspensions/Expulsions: {YES **_NO:22393}
Additional Barriers to Learning: {YES **_NO:22393}
Peer Relationship/Social Functioning: {not app:23674}

Data from school collected & reviewed for this evaluation:
{findings; school data adhd:15131}

INSTRUMENTS
NICHQ Vanderbilt Assessment Scale
This tool is a validated, parent-completed and/or teacher-completed questionnaire that obtains information needed for diagnosis about core symptoms of ADHD and areas of functional impairment. It includes a screen for comorbidities including externalizing disorders (oppositional-defiant and conduct) and internalizing disorders (depressive and anxiety). These scales should NOT be used alone to make any diagnosis.

Results/Response

- First patient with completed template on 3/17
- Fine tune based on feedback from users

Evaluation of Effectiveness and Limitations

- Effectiveness: how useful it is for the individual
- Build-in structure for follow-up visits

- Limitations: user preference, inherent template issues, standardized evaluation of user-friendliness

Recommendations for Future Projects

1. Fine-tune current template and make new templates for specialized populations
2. Compile a list of local resources that for ADHD treatment/support
3. Outreach to schools about signs/symptoms of less common presentations of ADHD

References

CDC: Attention-Deficit / Hyperactivity Disorder (ADHD): https://www.cdc.gov/ncbddd/adhd/research.html

National Survey of Children's Health (NSCH) https://www.childhealthdata.org/learn-about-the-nsch/NSCH

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