



Behavioral Health Identification, Treatment & Referral in Primary Care

Part Three: Behavioral Health Treatment for Children and Adolescents

Presenters

Robin K. Blitz, MD
Medical Director
Family Engagement Center / Special
Needs Initiative
UnitedHealthcare

Debra M. Katz, MD Senior National Medical Director Optum Behavioral Health

Learning Objectives

At the end of this educational activity, participants should be able to:

- Discuss the treatment modalities for ADHD, including psychosocial, educational and medical interventions
- Perform the recommended follow-up care for children on stimulant medication
- Perform the recommended annual metabolic monitoring tests for children on antipsychotic medication
- Describe the screening tools used to aid in the assessment for ADHD
- Explain the impact of untreated and undertreated ADHD
- List the HEDIS® measures related to ADHD and antipsychotic medication for children



Attention Deficit Hyperactivity Disorder (ADHD)

Attention Deficit Hyperactivity Disorder (ADHD)

- ➤ A neurodevelopmental disorder
- Developmentally inappropriate levels of hyperactivity, impulsivity, and inattention
- At least 6 months
- Impaired executive function and behavioral selfregulation. For example: Inattention, trouble organizing tasks and activities, forgetful, interrupts others
- Impaired function in at least 2 settings
- Comorbidities: mood, conduct, learning disorders



- * 7.2% Global Prevalence (Thomas et al., 2015)
- **10.2% of US Children** (Xu et al., 2018)
- 4.4% of US Adults (Kessler, et al., 2006)

Symptoms of ADHD – Three Types

Core symptoms from the DSM-5

Hyperactivity:

- Trouble sitting still for even a short time
- May squirm, fidget, or run around at the wrong times

Impulsivity:

- May talk too loudly or become easily angered
- Not able to wait for their turn to share, making it hard for them to play with other children
- May interrupt at inappropriate times

Inattention:

- Easily distracted and has a hard time focusing on any one task
- May have focused attention on one task to the detriment of other tasks

AAP Clinical Practice Guidelines (Wolraich, et.al, 2019)

ADHD Guidelines

ADHD is the most common neurobehavioral disorder of childhood and can affect academic achievement, well-being, and social interactions of children

The child's PCP should initiate an evaluation for ADHD for any child 4-18 yrs. who presents with academic or behavioral problems and SX of inattention, hyperactivity or impulsivity

To make a DX: determine that DSM criteria are met and document impairment in > 1 setting

Obtain information from parents/caregivers and from another source

Include assessments for other conditions that might mimic ADHD

Screen for behavioral comorbidities

Recognize that ADHD is a chronic condition and requires coordination of care with school and other community stakeholders

Screening Tools for ADHD

Use Screening Tools to aid in assessment:

- Screening tools aid in understanding symptoms for feedback from parents and teachers
- Screen for learning disabilities, depression, anxiety disorder or other conditions. Use the criteria from DSM-5 to diagnose ADHD
- A common screening tool is the Vanderbilt Scale, which is not copyright
 protected and can be downloaded for free from nichq.org
 https://www.nichq.org/sites/default/files/resource-file/NICHQ-Vanderbilt-Assessment-Scales.pdf
- Use CPT code 96127 (brief emotional/behavioral assessment) for ADHDfocused parent and teacher rating scales as a component of screening / diagnosis when there is concern. A maximum of 2 units of 96127 is reimbursed per visit



Screening Tools for ADHD



About +

Appr

Resources

NICHQ Vanderbilt Assessment Scales (Archived)

The NICHQ Vanderbilt Assessment Scales are used by health care professionals to help diagnose ADHD in children between the ages of 6-and 12-years. NICHQ is proud to have published the first edition in 2002 and has been at the forefront of supporting children and families affected by ADHD.

Since the first edition, there have been two subsequent editions: the 2nd Edition (2011) and 3rd Edition (2019). If the first edition is still valuable to your work, you are welcome to download it for free here. If you choose to reference the first edition in any publications, please include a reference to NICHQ.

NOTE: NICHQ is not able to receive or process any completed Vanderbilt assessments. Please consult with your pediatrician for an assessment.

Below are some helpful links for accessing and learning about the latest version of the scales.

- The 3rd edition of the Vanderbilt Assessment Scales can be purchased from the American Academy of Pediatrics (AAP) Bookstore
- The most recent ADHD guidelines from the AAP can be found here.

₫ Download

Publish Date: 2002

Source: NICHQ, American Academy of Pediatrics, McNeil

- Vanderbilt scales information for ADHD can be acquired at https://www.nichq.org/sites/default/files/resource-file/NICHQ-
 Vanderbilt-Assessment-Scales.pdf
- The 1st edition is still available at no cost

The Vanderbilt Parent –Informant example

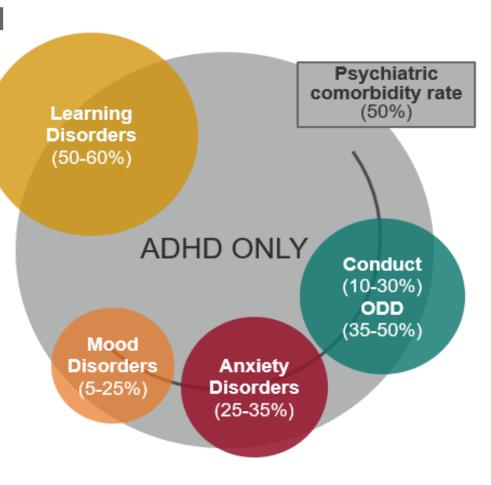
	NICHQ Vanderbilt Assessment Follow-	-up—PAREI	NT Informant						
Toda	ny's Date: Child's Name:		Date of	Birth:					
Parent's Name:		Parent's Phone Number:							
	Directions: Each rating should be considered in the context of what is appropriate for the age of your child. Please think about your child's behaviors in the past when rating his/her behaviors. Is this evaluation based on a time when the child was on medication was not on medication not sure?								
Sy	ymptoms	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				

https://www.nichq.org/sites/default/files/resource-file/NICHQ-Vanderbilt-Assessment-Scales.pdf

ADHD Comorbidities

Evaluation for ADHD should include assessment for coexisting conditions

- Greater social and educational impairments
- ✓ Use more mental health services
- ✓ Have lower remission
- Are referred less frequently for therapy



(Al Ghriwati, et al., 2017)

Treatment for ADHD



Psychosocial Interventions

- Parent behavior training (PBT) is an evidence-based practice that helps parents learn strategies to improve the child's behavior
- Counseling and extra support at home and school can also help children succeed and feel better about themselves



Educational Interventions

 May include accommodations based on an IEP or 504 Plan at the child's school and may include involvement with the school psychologist and treatment team



Medical Interventions

- Stimulants treat the core symptoms of ADHD: hyperactivity, impulsivity and inattention
- Non-stimulants: atomoxetine, clonidine and guanfacine may also be used to treat ADHD

(Pliszka, 2007)

School Services Individualized Education Programs (IEP)



The Individuals with Disabilities Education Act (IDEA)

- Federal special education law for children with disabilities
- Parents need to ask the school to have their child evaluated
- Under Other Health Impairments (OHI) ADHD is a qualifying disorder for an IEP



Includes other supports

- IEP Team includes a special education teacher, general education teacher, School Psychologist, school administration, parents, evaluation personnel, others as needed and the child
- Team meeting must occur within first 30 days and then yearly. Parents can ask for an updated team meeting at any time

School Services 504 Plan



1973 Rehabilitation Act

- Federal civil rights law to stop discrimination against people with disabilities
- Modification of curriculum
- Diagnosed impairment
- Limits learning or school performance



Under Regular Education

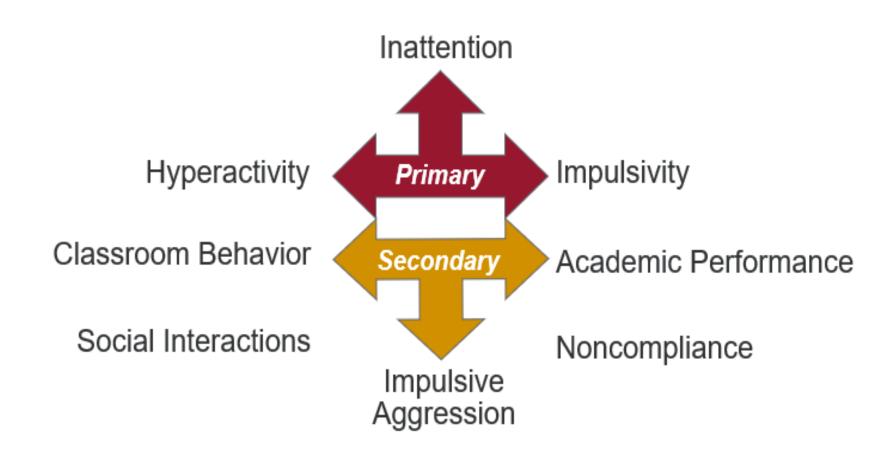
- No additional funding
- No additional assistance from special education department



Interventions

- Physical
- Instructional
- Behavioral
- Daily home report card

ADHD Medical Interventions: Psychostimulants



Central Nervous System Stimulants for ADHD

Methylphenidate

- Inhibits the reuptake of neurotransmitters (dopamine and norepinephrine)
- Brands: Quillivant XR, Daytrana, QuilliChew ER, Methylin, Aptensio XR,
 Cotempla XR-ODT, Metadate ER, Ritalin, Concerta, and Ritalin LA

Amphetamine Salts

- Inhibits the reuptake of neurotransmitters (dopamine and norepinephrine)
- Stimulates release of dopamine from presynaptic neuron
- Brands: Adderall and Mydayis are trade names for a combination drug containing four salts of amphetamine

ADHD Stimulant Medications

Med Class	Hours active				
	4 hours	4-8 hours	> 8 hours		
Mixed Amphetamine salts	Mixed Amph salts (low dose)	Mixed Amph salts (high dose)	Mixed Amph salts XR Lis-dexamfetamine Mixed Amph XR-ODT		
Dextro- amphetamine	Dextro-amphetamine	Dextro- amphetamine spansules			
Methylphenidate	MPH Dex-MPH	MPH-SR Dex-MPH-XR	OROS-MPH MPH-ER MPH-ER transdermal MPH-ER oral suspension MPH ODT		

ADHD Stimulants

Benefits

Long-Acting Formulations

Improved adherence

Lower abuse potential

Decreased stigma associated with multiple administrations during the day

Decreased potential for adverse effects related to dosage peak

ADHD: Other Medications

Tricyclic antidepressants	Imipramine Nortriptyline
Alpha 2-adrenergic agonists	Clonidine, Catapres TTS, Clonidine XR Guanfacine, Guanfacine-XR
Norepinephrine reuptake inhibitor	Atomoxetine
Atypical Antidepressants	Bupropion Venlafaxine Duloxetine

Impact of Untreated and Undertreated ADHD

> parental absenteeism and

↓ productivity

50% increase in bike accidents (DiScala et al., 1998) Healthcare (Liebson et al., 2001) 33% increase in ER visits System (Barkley et al., 1993, 1996; NHTSA, • 2–4 x more motor vehicle crashes 1997) 46% expelled (Barkley et al., 1990) School 35% drop out (Barkley et al., 1990) Substance use disorders: 2 x risk (Biederman et al., 1997) Society Farlier onset (Pomerleau et al., 1995) Less likely to quit in adulthood (Wilens et al., 1995) (Barkley et al., 1991; Brown & Pacini, $3-5 \times parental divorce or separation$ Family 1989) • $2-4 \times sibling fights$ (Mash & Johnston, 1983) Lower occupational status (Mannuzza et al., 1997) Occupation

(About ADHD, 2021)

ADHD Best Practice



- Listen to parents' and patients' concerns
- Complete a comprehensive assessment
- Use standardized tools to evaluate
- Get input from more than one source
- Look for and treat comorbidities
- Treat using evidence-based practice and multimodal treatment modalities

Strategies for Success

Specify target outcomes to guide treatment

If child does not meet target outcomes, then reevaluate original diagnosis, use of appropriate treatments, adherence to treatment plan, and presence of comorbidities



Use Shared Decision Making*

- Establish treatment program with family and patient
- Supports child / family & clinician collaboration
- Part of Family-Centered Care
- Incorporates voices of all stakeholders
- Improved health care
- Improved patient-parent satisfaction

Strategies that Support Families support the Child

- Assess family strength and coping
- Signs of couple conflict / parental depression
- Ongoing education
- Coordination of care
- Attention to sibling needs
- Transition to adult care: www.gottransition.org

^{*(}Adams & Levy, 2017)

ADHD Toolkit

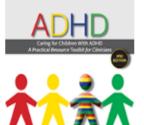


ADHD Toolkit

Autism Toolkit

Bright Futures Toolkit

Caring for Children With ADHD: A Practical Resource Toolkit for Clinicians, 3rd edition



William Zurhellen, MD, FAAP; Herschel R. Lessin, MD, FAAP; Eugenia Chan, MD, MPH, FAAP; Carla Counts Allan, MS, PhD; Mark Wolraich, MD, FAAP; Eli Sprecher, MD, MPP; Steven W. Evans, PhD

Most children with ADHD have their first encounter for care within their primary clinician's practice—their "medical home."



These tools help you prepare for that encounter and beyond: readying your staff, screening, diagnosis, treatment, ongoing follow-up, and negotiating insurance payments for every step your patients need.

Quick Links: Clinical Practice Guideline | Preparing Your Practice | Initial Patient Intake | Comprehensive Assessment | Vanderbilt Rating Scales | Treatment and Follow-up

ADHD Toolkit | AAP Toolkits | American Academy of Pediatrics



Antipsychotic Medications in Children and Adolescents

Antipsychotic Medication Treatment in children

- > FDA-approved indications for antipsychotic medication use in children (CMS, 2015)
 - Acute depressive episodes associated with Bipolar I Disorder
 - Irritability associated with Autism Spectrum Disorder
 - Manic or mixed episodes associated with Bipolar I Disorder
 - Tourette's Disorder
 - Schizophrenia
- Antipsychotics are often prescribed to children and adolescents off-label for disruptive behaviors, anxiety, irritability, and sleep problems

 (Dinnissen et al., 2020)
 - Severe behavioral problems combativeness and/or explosive hyper-excitable behavior and short-term treatment of hyperactive children who show excessive motor activity with accompanying conduct disorders
 - Hyperactivity (Medi-Cal, 2015)

Unsupported Off-Label Prescribing

Symptom-based use of antipsychotics can lead to inappropriate, non-FDA-approved, and unsupported prescribing

Severe symptoms in children like aggression can be upsetting to families, educators and physicians, and can lead to a sense of urgency to manage symptoms with medication

(www.psychiatrictimes.com)

Antipsychotic Medication Treatment in Children

"Antipsychotics serve as a primary treatment for schizophrenia. In other circumstances, antipsychotics are generally only used after other interventions, both psychosocial and pharmacological, have failed (e.g., disruptive behavior disorders)." (AACAP Guidelines, 2011, p10)

"Children taking antipsychotic medications receive an atypical antipsychotic 90% of the time, and in the majority of patients the use is for an off-label indication." (CMS, 2015, p3)

Atypical Antipsychotic Medications

- Six atypical antipsychotics currently have FDA-approved indications for use in children and adolescents (CMS, 2015)
 - Aripiprazole
 - Asenapine
 - Olanzapine
 - Paliperidone
 - Quetiapine
 - Risperidone
- Atypical antipsychotics are not FDA approved for children younger than 5 years old
- "The **FDA-approved** indications and dosages for atypical antipsychotics in pediatric patients are provided in the dosing table in the document "Atypical Antipsychotics: U.S. Food and Drug Administration-Approved Indications and Dosages for Use in Pediatric Patients" (CMS, 2015, p2)

Adverse Reactions and Risks of the Use of Atypical Antipsychotic in Pediatric Patients

Children and adolescents taking antipsychotic medications are at a higher risk for:

(CMS, 2015; Medi-Cal, 2015; Melamed, 2021)

- metabolic change
- weight gain
- cardiovascular changes
- hyperprolactinemia
- type 2 diabetes
- suicidality

- hyperlipidemia
- hyperglycemia
- prolactin elevation
- dizziness and blurred vision
- menstrual problems for girls

A patient baseline for weight, blood glucose level, and lipid panel should be established, and they should be monitored for weight and metabolic changes

(CMS, 2015)

Prescribing Antipsychotics in Children: Guideline Adherence

Clinicians should follow evidence-based practices and the existing empirical data on the efficacy and safety

Recommendation 1

 Follow the guidelines found in the American Academy of Child and Adolescent Psychiatry Practice Parameters for the use of Atypical Antipsychotics in Children and Adolescents 2011

Recommendation 2

 Prior to the initiation of and during treatment with an atypical antipsychotic, the general guidelines that pertain to the prescription of psychotropic medications should be followed:

Resource

- Follow a careful diagnostic assessment and pay attention to co-morbid conditions
- https://www.aacap.org/App Themes/AACAP/docs/practice para meters/Atypical antipsychotic Medications Web.pdf

Prescribing Antipsychotics in Children: Guideline Adherence and Metabolic Monitoring

Recommendation 3

Antipsychotic medications can increase a child's risk for developing health concerns, including metabolic health complications. The goal is for children to have metabolic monitoring by having both a **blood glucose test** (**glucose or HbA1c**) and **LDL-C testing** annually



Record your efforts and include on patient bill:

- Glucose test or HbA1c test and LDL-C cholesterol test as identified by claim/encounter
- Document results in the member's medical record
- ✓ Metabolic testing needs to occur prior to the prescription of an antipsychotic medication to set a baseline
- ✓ Monitor and review of metabolic side-effect needs to occur at least yearly

https://www.dellchildrens.net/wp-content/uploads/sites/66/2021/03/TCDPEC-0322-21-Medicaid-APM-SSD-Prov-NL-Article-FINAL.pdf

Antipsychotic Medications and Psychosocial Care



- In a study by Dinnissen et al. (2020) only 37% of the children and adolescents continuously received concomitant psychosocial interventions
- Psychosocial treatment by behavioral health practitioners needs to occur along side antipsychotic medication prescription (Dinnissen et al., 2020)
- Behavioral health practitioners include psychologists, counselors, social workers, peer support, etc.

Psychosocial Care Services

Psychosocial care includes any of these therapies and services provided by a behavioral health practitioner

Many can be done in person or virtually



- Activity therapy, such as music, dance, art or play therapies not for recreation
- Training and educational services related to care and treatment
- Social work and psychological services
- Group psychotherapy other than of a multiplefamily group, in a partial hospitalization setting
- Behavioral health counseling and therapy
- Mental health partial hospitalization, treatment
- Community psychiatric supportive treatment
- Self-help/peer services
- Crisis intervention service
- Partial hospitalization services
- Intensive outpatient psychiatric services



HEDIS® Measures

What Are The HEDIS Measures & Why Are We Talking About Them?

HEDIS® (Healthcare Effectiveness Data and Information Set) is a comprehensive set of standardized claims-based performance measures designed by NCQA® * to provide purchasers and consumers with the information they need for reliable comparison of Health Plan performance

HEDIS measures related to behavioral Health treatment for children and adolescents

- Follow Up Care for Children Prescribed with ADHD medication (ADD)
- Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)
- Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

*NCQA® - The National Committee for Quality Assurance is an independent, non-profit organization dedicated to improving health care quality. NCQA developed metrics to measure outcomes in key areas.

Why Are These Measures Important to A PCP?

By establishing a **therapeutic alliance** and a **collaborative**, **stigma free approach to care**, your patients are more likely to **communicate** with you



Continuity of care is crucial to a patient's clinical trajectory



You may be their FIRST point of contact for ongoing care



You can help reduce the likelihood of a crisis and promote their recovery

Child and Adolescent Measures

Follow Up Care for Children Prescribed with ADHD medication (ADD)

The percent of children 6–12 years of age who were newly prescribed attention-deficit/hyperactivity disorder (ADHD) medication who had at least three follow-up care visits within a 10-month period, one of which was within 30 days of when the first ADHD medication was dispensed

Two rates are reported:

- Initiation: First follow-up within 30 days of filling script
- Continuation: Two more follow-up visits within 9 months (only for those who stayed on the medication)
- Patients who do not continue their medication are removed from the continuation phase. So, this measure is less about medication compliance and more about attending visits
- ➤ It may help to have a protocol in place to follow-up with a patient within 30 days when prescribing an ADHD medication for the first time

Child and Adolescent Measures

Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

The percentage of children and adolescents 1–17 years of age who had a new prescription for an antipsychotic medication and had documentation of psychosocial care as first-line treatment

- ➤ This measure **excludes** children with psychotic disorders and bipolar disorder. This measure only applies to antipsychotic prescriptions for kids with other behavioral disorders
- Psychosocial treatment should be tried prior to prescribing antipsychotic meds

Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)

The percentage of children and adolescents 1–17 years of age who had two or more antipsychotic prescriptions and had metabolic testing

Testing for Diabetes and Cardiac disease are needed annually

HEDIS® Measures Adherence Supports Best Practices



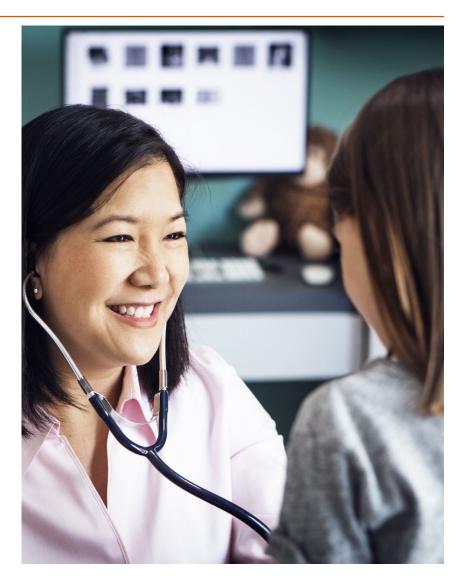
Your relationship & communication with a patient matters

These tips below help you support your patients in adhering to their treatment plans and receiving follow up care when needed

- Establishing a therapeutic alliance builds trust and openness, such that a patient is more likely to reach out before a crisis
- Establishing open communication can eliminate stigma and increase the likelihood that your patients will discuss negative side effects or changes from medications
- Engaging social supports and establishing an interdisciplinary team approach to care helps build more opportunities for communication in real time

Takeaways For PCPs

- Kids with ADHD have comorbidities which need assessment and treatment
- Consider long-acting formulations when prescribing medication for ADHD
- Psychosocial treatment should be tried prior to prescribing antipsychotic meds for children with aggression and behavioral disturbances
- When prescribing antipsychotics, a baseline and twice a year metabolic screening should be completed





Resources

Resources & References for Patients and Families

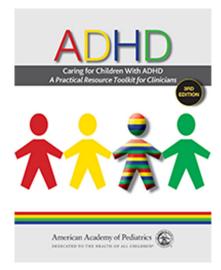
- ADHD, 3rd Edition, Mark Wolraich, MD and Joseph F Hagan, MD, Pub 05/21/2019
- Attention Deficit Disorder Association https://add.org/
- Center for Parent Information and Resources https://www.parentcenterhub.org/
- Children and Adults with ADHD (CHADD) https://chadd.org/
- Family Voices http://familyvoices.org/
- Healthychildren.org from the AAP <u>https://www.healthychildren.org/English/health-issues/conditions/adhd/Pages/default.aspx</u>

- LDOnline http://www.ldonline.org/adhdbasics
- Learning Disabilities Association of America https://ldaamerica.org/
- National Institute of Mental Health <u>https://www.nimh.nih.gov/health/topics/attention-deficit-hyperactivity-disorder-adhd/index.shtml</u>
- PACER Center <u>https://www.pacer.org/parent/</u>
- Raising an Organized Child, Damon Korb, MD, Pub 06/18/2019
- Understood for learning and attention issues https://www.understood.org/en/learning-attention-issues

More Resources – American Academy of Pediatrics

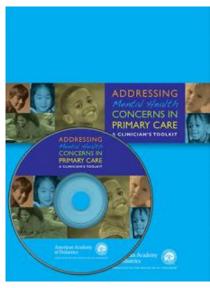
ADHD - Caring for Children With ADHD: A Practical Resource Toolkit for Clinicians, 3rd Edition

https://shop.aap.org/adhd-caring-for-children-with-adhd-a-practical-resource-toolkit-for-clinicians-3rd-edition/



Addressing Mental Health Concerns in Primary Care: A Clinician's Toolkit

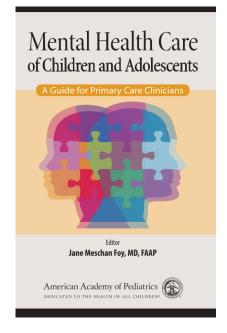
https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Pages/Addressing-Mental-Health-Concerns-in-Primary-Care-A-Clinicians-Toolkit.aspx



More Resources – American Academy of Pediatrics

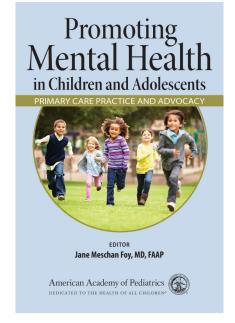
Mental Health Care of Children and Adolescents: A Guide for Primary Care Clinicians

https://shop.aap.org/mental-health-careof-children-and-adolescents-a-guide-forprimary-care-clinicians/



Promoting Mental Health in Children and Adolescents

https://shop.aap.org/promoting-mental-health-in-children-and-adolescents-ebook/



More Resources – American Academy of Pediatrics



<u>Understanding ADHD Brochure - 50/pk</u> [Brochure] - AAP

Other Resources:

Understanding ADHD: Information for Parents About AttentionDeficit/Hyperactivity Disorder
(pediatricspec.com)

Medication Resources

- For up-to-date information about atypical antipsychotic drugs, visit the Postmarket Drug Safety Information for Patients and Providers page at http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationfor-PatientsandProviders/ucm094303.htm on the FDA website
- The Center for Drug Evaluation and Research (CDER) hosts a website providing health professionals with current information on over-the-counter (OTC) and prescription drugs. Visit http://www.fda.gov/Drugs/ResourcesForYou/HealthProfessionals to access drug-related databases, information on drug recalls and alerts, current information on new and generic drug approvals, and information on drug safety and availability

- About ADHD Basic Info & Statistics. (2020-1221). Retrieved https://www.adhd-coach-asn.com/adhd-information-and-help/adhd statistics-and-information
- Adams, R.C. & Levy, S.E., (2017). Shared decision-making and children with disabilities: Pathways to consensus. Pediatrics. 139(6):e20170956. doi: 10.1542/peds.2017-0956. PMID: 28562298.
- Al Ghriwati, N., Langberg, J. M., Gardner, W., Pugh, J., Kelleher, K. J., Baum, R., Brinkman, W. B., Lichtenstein, P., & Epstein, J. N. (2017). Impact of Mental Health Comorbidities on the Community-Based Pediatric Treatment and Outcomes of Children with Attention Deficit Hyperactivity Disorder. *Journal of developmental and behavioral pediatrics*, 38(1), 20–28. https://doi.org/10.1097/DBP.00000000000000359
- American Academy of Child Adolescent Psychiatry (2011) Practice parameter for the use of atypical antipsychotic medications in children and adolescents. vol 2014 retrieved https://www.aacap.org/App_Themes/AACAP/docs/practice_parameters/Atypical_antipsychotic_Medications_Web.pdf
- American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, 5th edition. Arlington, VA., American Psychiatric Association, 2013.
- Atypical Antipsychotic Medications: Use in Pediatric Patients (October 2015), Center for Medicare & Medicaid Services (CMS).
 Education Medicaid Integrity Contractor for the CMS Medicaid Program Integrity Education (MPIE). Retrieved https://www.cms.gov/Medicare-Medicaid-Coordination/Fraud-Prevention/Medicaid-Integrity-Education/Pharmacy Education-Materials/Downloads/atyp-antipsych-pediatric-factsheet11-14.pdf
- Barkley, R. A., Fischer, M., Edelbrock, C. S., & Smallish, L. (1990). The adolescent outcome of hyperactive children diagnosed by research criteria: I. An 8-year prospective follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29(4), 546–557. https://doi.org/10.1097/00004583-199007000-00007
- Barkley, R. A., DuPaul, G. J., & McMurray, M. B. (1991). Attention deficit disorder with and without hyperactivity: clinical response to three dose levels of methylphenidate. *Pediatrics*, 87(4), 519–531.
- Barkley, R. A., Guevremont, D. C., Anastopoulos, A. D., DuPaul, G. J., & Shelton, T. L. (1993). Driving-related risks and outcomes of attention deficit hyperactivity disorder in adolescents and young adults: a 3- to 5-year follow-up survey. *Pediatrics*, 92(2), 212–218.

- Barkley, R. A., Murphy, K., & Kwasnik, D. (1996). Psychological adjustment and adaptive impairments in young adults with ADHD. *Journal of Attention Disorders*, 1(1), 41–54. https://doi.org/10.1177/108705479600100104
- Biederman, J., Wilens, T., Mick, E., Faraone, S. V., Weber, W., Curtis, S., Thornell, A., Pfister, K., Jetton, J. G., & Soriano, J. (1997).
 Is ADHD a risk factor for psychoactive substance use disorders? Findings from a four-year prospective follow-up study.
 Journal of the American Academy of Child and Adolescent Psychiatry, 36(1), 21–29. https://doi.org/10.1097/00004583
 199701000-00013
- Brown, R. T., & Pacini, J. N. (1989). Perceived family functioning, marital status, and depression in parents of boys with attention deficit disorder. *Journal of Learning Disabilities*, 22(9), 581–587. https://doi.org/10.1177/002221948902200911
- Dinnissen, M., Dietrich, A., van der Molen, J. H., Verhallen, A. M., Buiteveld, Y., Jongejan, S., Troost, P. W., Buitelaar, J. K.,
 Hoekstra, P. J., & van den Hoofdakker, B. J. (2020). Prescribing antipsychotics in child and adolescent psychiatry:
 guideline adherence. *European Child & Adolescent Psychiatry*, 29(12), 1717–1727. https://doi.org/10.1007/s00787-020
 01488-6
- DiScala, C., Lescohier, I., Barthel, M. & Li, G. (1998). Injuries to children with attention deficit hyperactivity disorder. Pediatrics 102, 1415-21
- Goldman, L. S., Genel, M., Bezman, R. J., & Slanetz, P. J. (1998). Diagnosis and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Council on Scientific Affairs, *American Medical Association*. JAMA, 279(14), 1100–1107. https://doi.org/10.1001/jama.279.14.1100
- Greenhill, L.L. (1995). Attention-deficit hyperactivity disorder: the stimulants. *Child Adolescent Psychiatry Clinical North American Journal*,4:123-68
- How to Establish a School-Home Daily Report Card. Retrieved http://ny2aap.org/ADHD/EstablishingDailyReportCard.pdf
- Kessler, R.C., Adler, L., Barkley, R., Biederman, J., Conners, C.K., Demler, O., Faraone, S.V., Greenhill, L.L., Howes, M.J., Secnik, K., Spencer, T., Ustun, T.B., Walters, E.E.& Zaslavsky, A.M. (2006). The prevalence and correlates of adult ADHD in the United States: Results from the National Comorbidity Survey Replication. *American Journal of Psychiatry*. 163(4):716-23. PMID: 16585449

- Leibson, C. & Katusic, S. & Barbaresi, W. & Ransom, J. & O'Brien, P. (2001). Use and costs of medical care for children and adolescents with and without attention-deficit/hyperactivity disorder. *JAMA, The Journal of the American Medical Association*. 285. 60-6. 10.1001/jama.285.1.60.
- Mannuzza, S., Klein, R.G., Bessler, A., Malloy, P. & Hynes, M.E.. (1997). Educational and occupational outcome of hyperactive boys grown up. Journal of American Academy of Child Adolescent Psychiatry, 36, 1222–1227.
- Mash, E. J., & Johnston, C. (1983). Parental perceptions of child behavior problems, parenting self-esteem, and mothers' reported stress in younger and older hyperactive and normal children. *Journal of Consulting and Clinical Psychology*, 51(1), 86 99. https://doi.org/10.1037/0022-006X.51.1.86
- Mead L., Ayres A., Blake J.A, Scott J.G. (2021) Monitoring of metabolic side-effects in children and adolescents prescribed antipsychotic medication: A systematic review. Aust N Z J Psychiatry. Aug;55(8):763-771. doi: 10.1177/00048674211009620. Epub 2021 May 5. PMID: 33951933.
- Medi-Cal Improving the Quality of Care: Antipsychotic Use in Children and Adolescents March 31, 2015, retrieved https://files.medical.ca.gov/pubsdoco/dur/articles/dured_23511.01.pdf
- Melamed, O.C., LaChance, L.R. O'Neill, B.G., Rodak, T. &. Taylor, V.H. (2021). Interventions to improve metabolic risk screening among children and adolescents on antipsychotic medication: A systematic review. *Journal of Child and Adolescent Psychopharmacology*. 31(1). 63-72.http://doi.org/10.1089/cap.2020.0115
- Metabolic monitoring and diabetes screening measures for those on antipsychotics medications. Dell's Children Health Plan Provider Update. (March 21, 2021). Retrieved https://www.dellchildrens.net/wp content/uploads/sites/66/2021/03/TCDPEC-0322-21-Medicaid-APM-SSD-Prov-NL-Article-FINAL.pdf
- NHTSA. (1997). Retrieved https://www.nhtsa.gov/
- Off label prescribing of antipsychotics for youth. Psychiatrictimes.com. (September 18, 2017). Retrieved https://www.psychiatrictimes.com/view/label-prescribing-antipsychotics-youths-who-should-be-treated
- Pomerleau, O.F., Downey, K.K, Stelson, F. W. & Pomerleau, C.S. (1997). Cigarette smoking in adult patients diagnosed with attention deficit hyperactivity disorder. *Journal of Substance Abuse*, 7(3), 373-378.https://doi.org/10.1016/0899-3289(95)90030-6.

- Pliszka, S., & AACAP Work Group on Quality Issues (2007). Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46(7), 894–921. https://doi.org/10.1097/chi.0b013e318054e724
- Spencer, T., Biederman, J., Wilens, T., Harding, M., O'Donnell, D., & Griffin, S. (1996). Pharmacotherapy of attention-deficit
 hyperactivity disorder across the life cycle. *Journal of the American Academy of Child and Adolescent Psychiatry*, 35(4),
 409–432. https://doi.org/10.1097/00004583-199604000-00008
- Thomas, Rae et al. (April 2015). Prevalence of Attention-Deficit/Hyperactivity Disorder: A Systematic Review and Meta-analysis.
 Pediatrics, 135(4), pp. e994–e1001.
- Wilens, T.E., Biederman, J., Kiely, K., Bredin, E. & Spencer, T.J. (1995). Pilot study of behavioral and emotional disturbances in the high-risk children of parents with opioid dependence. *Journal of American Academy of Child Adolescent Psychiatry*, 34(6). 779-785. DOI:https://doi.org/10.1097/00004583-199506000-00019
- Wilens, T. E., & Spencer, T. J. (2000). The stimulants revisited. *Child and adolescent psychiatric clinics of North America*, 9(3), 573 viii.
- Wolraich, M. L., Hagan, J. F., Jr, Allan, C., Chan, E., Davison, D., Earls, M., Evans, S. W., Flinn, S. K., Froehlich, T., Frost, J., Holbrook, J. R., Lehmann, C. U., Lessin, H. R., Okechukwu, K., Pierce, K. L., Winner, J. D., Zurhellen, W., & SUBCOMMITTEE ON CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVE DISORDER (2019). Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*, 144(4), e20192528. https://doi.org/10.1542/peds.2019-2528
- Xu, Guifeng et al. (August 2018). Twenty-Year Trends in Diagnosed Attention-Deficit/Hyperactivity Disorder Among US Children and Adolescents, 1997-2016. JAMA Network Open. 2018;1(4):e181471.



Thank you.