Attention-Deficit/Hyperactivity Disorder (ADHD) Pharmacological Treatment Recommendations

Treatment Recommendations for a Patient with a Confirmed Diagnosis of ADHD AND Level of Impairment to Warrant Pharmacological Management

Preschool-aged children 4 years to 6th birthday	School-aged children 6 years to 12th birthday	Adolescents 12 years to 18th birthday	Adults 18 years and older
First-line treatment: Evidence-based behavioral interventions and classroom behavioral interventions **Second-line:** May prescribe methylphenidate if no significant improvement and moderate-to-severe continued disturbance	Treat with pharmacologic therapy AND *evidence-based behavioral interventions and/or classroom behavioral interventions	Treat with pharmacologic therapy and may consider *evidence-based behavioral interventions and/or classroom behavioral interventions	Treat with pharmacologic therapy and cognitive behavioral therapy/ psychosocial treatment

*For further information regarding evidence-based behavioral interventions please see Appendix 2.2 “Nonpharmacologic Treatments”

Guidance for Initial Pharmacological Management of ADHD

Stimulant therapy is usually considered first-line in patients 6 years of age and older, unless the patient is not a suitable candidate. Methylphenidate and amphetamine options tend to have similar effectiveness, but amphetamines may be associated with more side effects. Patient-specific factors should be evaluated to determine if the patient is a candidate for use of a stimulant medication.

Contraindications

- Known sensitivity
- Serious cardiac conditions
- Hyperthyroidism
- Glaucoma
- Patients who have used an MAOI, linezolid, or methylene blue within the last 14 days
- History of substance misuse
- Agitated state (use caution in patients with bipolar disorder/mania, as stimulants have the potential to induce mania)

Precautions

- Patients with suicidal ideation or major depression
- Mild hypertension or tachycardia
- Significant hepatic or renal impairment
- History of seizure disorders
- Eating disorders
- Cerebrovascular disease
- Pregnancy/breastfeeding
- Geriatric patients

Caregiver/patient/family preference regarding use of a stimulant versus a non-stimulant medication should be discussed and considered. When starting adolescents and adults on stimulant medications, clinicians should obtain the patient’s consent to treat and assess for symptoms of substance use and monitor prescription refill requests for signs of misuse or diversion. Consider the patient’s insurance coverage and formulary requirements when selecting an agent. Starting a stimulant:

- Long-acting formulations are recommended
- Children and adolescents starting stimulants should be initiated at the starting dose and then gradually titrated weekly to the dose that optimally controls symptoms with minimal adverse effects
- Adults starting stimulants should start at the lowest possible dose and titrate slowly. Before switching to another agent, titrate to the maximum dose if no side effects are present.

If the patient is **not** a candidate for stimulant therapy and/or caregiver/patient/family preference is to avoid stimulant therapy, common non-stimulant treatment includes atomoxetine, viloxazine, guanfacine or clonidine. Consider and educate the patient on the duration of time to maximum response of the chosen agent. The time for maximum response tends to be within a few weeks for stimulants whereas clonidine and guanfacine can take about 2 to 4 weeks and viloxazine or atomoxetine may take up to 6 to 8 weeks. Once pharmacological and/or non-pharmacological treatment is initiated, continue to closely monitor all patients receiving pharmacological therapy.

See “ADHD Monitoring and Follow Up” for specific recommendations.

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Nonpharmacological Treatments for Attention-Deficit/Hyperactivity Disorder (ADHD)

	Preschool-aged Children (<6 Years)	School-aged Children (6 years to 12th birthday)	Adolescents (12 years to 18th birthday)	Adults (18 years and older)
First-Line	• Behavioral Classroom Management • Behavioral Parent Management Training • Combined Behavior Management Interventions	• Behavioral Classroom Management • Behavioral Parent Management Training • Behavioral Peer Intervention • Combined Behavior Management Interventions • Organization Training	• Organization Training	• Not Applicable (N/A)
Second-Line	• Combined Training Interventions (extensive practice)	• Combined Training Interventions (extensive practice)	• Combined Training Interventions (extensive practice)	• Cognitive Behavioral Therapy (group or individual)
Third-Line	• N/A	• N/A	• Behavioral Parent Management Training	• Psychological Counseling/ Emotional Therapy • Use of technological aids
Limited Evidence	• Combined Training Interventions (limited practice)	• Cognitive Behavioral Training • Combined Training Interventions (limited practice) • Modified Behavioral Parent Training	• Combined Training Interventions (limited practice)	• Organizational Training
Lacking Evidence	• Social Skills Training	• Social Skills Training	• N/A	• N/A

Level of Evidence Key

First Line: Statistically significantly superior to control group or equivalent to an already well established treatment

Second Line: At least two experiments showing superiority to control group

Third Line: At least one experiment showing superiority to control group

Limited Evidence: Not yet tested in a randomized controlled trial

Lacking Evidence: Tested and found to be inferior to control group or experimental studies suggest treatment produces no beneficial effect

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Attention-Deficit/Hyperactivity Disorder (ADHD) Monitoring and Follow-up

Maintenance follow-up visits should occur at least every 3 to 6 months

Review of Systems

- Special attention given to blood pressure, heart rate, height, weight
- Comparison with patient's baseline
- Comorbid concerns

Medication Management

- Adverse effects
- Efficacy/symptom control- use of ADHD rating scales
- Dosage adjustments (titration vs. dose reduction)
- Adherence (timing of refill request)
- Risk Reduction Strategies (prescription stimulants in patients who require additional monitoring)
  - Prescription Drug Monitoring Program
  - Urine drug testing
  - Ongoing risk screening

Nonpharmacological Management

- Appropriate referrals and coordination of care
- Adherence to nonpharmacological treatments
- School or workplace accommodations

Overall Review of Treatment Plan

- Symptom management assessment- ADHD assessment scales
- Referrals to additional specialists where indicated
- Parental/caregiver/family member concerns addressed
- Scheduling of follow-up visits

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Attention-Deficit/Hyperactivity Disorder (ADHD) Treatment Recommendations

Preschool-aged children (<6 years)*

A. Primary care clinician (PCC) should prescribe evidence-based behavioral parent training in behavior management (BPMT) and/or behavioral classroom interventions.

B. In patients greater than 4 years of age, methylphenidate may be considered if there is no significant improvement with behavioral interventions and there is continued moderate to severe disturbance.

C. In areas in which evidence-based behavioral treatments are not available, the clinician needs to weigh the risk of starting medication before the age of 6 years.

**Of note, the AAP advises to avoid a diagnosis of ADHD prior to the age of 4 years.*

School-aged children: 6 years to 12th birthday

A. PCC should prescribe U.S. Food and Drug Administration (FDA)-approved medication for ADHD along with BPMT and/or behavioral classroom interventions.

B. Educational interventions and instructional supports are a necessary part of the treatment plan.

Adolescents: 12 years to 18th birthday

A. PCC should prescribe FDA-approved medication for ADHD.

B. PCC is encouraged to prescribe evidence-based training interventions and/or behavioral interventions.

C. Educational interventions and instructional supports are a necessary part of the treatment plan.

Adults: 18 years and older

A. FDA-approved stimulant (for those determined to be candidates for use of prescription stimulants) or atomoxetine are considered first-line treatments for ADHD after coexisting mental health and substance use disorders are treated.

   a. Consider long-acting stimulants for all patients who are candidates for stimulants due to lower misuse and diversion potential.

   b. Consider a non-stimulant (atomoxetine, bupropion, clonidine/guanfacine) with recent substance use or history of substance use disorder.

B. Without sufficient symptom improvement, consider adjusting the dose or trying alternative medications (TCAs, modafinil, etc.).

C. CBT has been shown to be helpful as adjunctive treatment with medication.

D. To monitor for misuse or diversion of stimulants, clinicians should consider using a patient and provider agreement and other risk reduction strategies at their discretion.

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Assessment Tools for Attention-Deficit/Hyperactivity Disorder for Children

Broadband Assessments	Narrowband Assessments
Achenbach System of Empirically Based Assessment (ASEBA)©	Academic Performance Rating Scale (APRS)
Child Behavior Checklist (CBCL)©	ADHD Rating Scale-5 for Children and Adolescents (ADHD-RS-5)©
Caregiver-Teacher Report Form (C-TRF)©	Attention-Deficit Disorder Evaluation Scale-Fifth Edition (ADDES-5)©
Teacher's Report Form (TRF)©	Brown Attention-Deficit Disorder Scales©
Youth Self-Report (YSR)©	Conners 4™ Conners 4th Edition- ADHD Index
Barkley Functional Impairment Scale – Children and Adolescents (BFIS-CA)©	Impairment Rating Scale
Behavior Assessment System for Children Third Edition (BASC-3)©	NICHQ Vanderbilt Assessment Scales©
Teacher Ratings Scale (TRS)©	Strengths and Difficulties Questionnaire (SDQ)©
Parent Rating Scale (PRS)©	Swanson, Kotkin, Agler, M-Flynn, & Pelham (SKAMP) Rating Scale
Self-Report of Personality Form (SRP)©	Swanson, Nolan, and Pelham Teacher and Parent Rating Scale (SNAP-IV)
Child and Adolescent Functional Assessment Scale (CAFAS)©	
Conners 4™ Conners 4th Edition	
Pediatric Symptom Checklist (PSC)©	

Clinical Interviews	
Structured Interviews	**Semi-Structured Interviews**
Children's Interview for Psychiatric Syndromes (ChIPS and P-ChIPS)©	Child and Adolescent Psychiatric Assessment (CAPA)©
Diagnostic Interview Schedule for Children-IV (DISC-IV)©	Preschool Age Psychiatric Assessment (PAPA)©
Mini International Neuropsychiatric Interview for Children and Adolescents (MINI KID)©	Kiddie-Schedule for Affective Disorders and Schizophrenia for School-Aged Children Present and Lifetime (K-SADS-PL)©

Screening/Assessment Tools for Conditions Related to ADHD for Children

ANXIETY DISORDERS

- SCARED (child)
- GAD-7 (age 11+)
- RCADSs (child)

DEPRESSIVE DISORDERS

- RCADS (child)
- PHQ-9 © (age 12+)
- CES-DC (child)

BIPOLAR DISORDERS

- The Mood Disorder Questionnaire (age 11+)

AUTISM SPECTRUM DISORDER

- ASSQ (child)
- M-CHAT-R/F © (16 to 30 months of age)

TRAUMA

- CAPS-CA-5 (child)

LEARNING DISORDER

- WISC-V © (child)

OPPOSITIONAL DEFIANT DISORDER

- Vanderbilt© (child)
- SNAP-IV (child)

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Assessment Tools for Attention-Deficit/Hyperactivity Disorder (ADHD) for Adults

Broadband Assessments	Narrowband Assessments
Achenbach System of Empirically Based Assessment (ASEBA)©	Adult ADHD Self-Report Scale Symptom Checklist (ASRS-DSM-5)©
Adult Behavior Checklist (ABCL)©	Barkley Adult ADHD Rating Scale – IV (BAARS-IV)
Adult Self-Report (ASR)©	Barkley Deficits in Executive Functioning Scale (BDEFS for Adults)©
Older Adult Behavior Checklist (OABCL)©	Barkley Functional Impairment Scale (BFIS for Adults)©
Older Adult Self-Report (OASR)©	Brown Adult Attention-Deficit Disorder Scales
Minnesota Multiphasic Personality Inventory (MMPI-3)©	Conners' Adult ADHD Rating Scales (CAARS) ©
Personality Assessment Inventory (PAI)™	Copeland Symptom Checklist for Adult ADHD
Clinical Interviews	
Structured Interviews	**Semi-Structured Interviews**
Conners Adult ADHD Diagnostic Interview for DSM-IV™ (CAADID) ™	The Young Adult Psychiatric Assessment (YAPA)©
Mini International Neuropsychiatric Interview (MINI) (Adult Version)©	The Diagnostic Interview for ADHD in Adults (DIVA-5)©

Screening/Assessment Tools for Conditions Related to ADHD for Adults

ANXIETY DISORDERS

- GAD-7 (age 11+)

DEPRESSIVE DISORDERS

- PHQ-9 © (age 12+)

TRAUMA

- PCL-C

BIPOLAR DISORDERS

- The Mood Disorder Questionnaire (age 11+)
- GBI

LEARNING DISORDER

- WIAT-4

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Attention-Deficit/Hyperactivity Disorder (ADHD) Diagnostic Process

New or existing patient presenting with attention or behavioral symptoms; ADHD considered as possible diagnosis

- Identify relevant symptoms and the timeline of development.
- Obtain and review any relevant reports/documentation such as:
  - Previous evaluations or ADHD rating scales
  - Prior interventions
  - Relevant school documentation, collateral reports, observations, medical records, or employment history

Screening for evidence consistent with ADHD based on DSM-5-TR and within scope of practice

- 6 or more DSM-5-TR listed symptoms of either inattention and/or hyperactivity/impulsivity present in children 16 years or younger (in 2 or more settings)
  - Documentation of ADHD symptoms prior to 12 years of age
  - Symptoms presenting for >6 months
  - Symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning
- 5 or more DSM-5-TR listed symptoms of either inattention and/or hyperactivity/impulsivity present in adolescents and adults 17 years or older (in 2 or more settings)
  - ADHD symptoms prior to 12 years of age
  - Symptoms presenting for >6 months
  - Symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning

Positive Screening and within scope of practice?

No

- Refer for specialized evaluation
- Explain the evaluation process to the caregiver/patient and address any questions

Yes

Explain the evaluation process to the caregiver/patient and address any questions

Conduct:

- Narrowband and/or broadband assessments to include multiple informants in multiple settings
- A thorough physical examination to rule out any medical causes of symptoms/behavior
- Interview regarding social situations and family history
- Additional mental health evaluations, interviews, or assessments for possible alternative diagnoses and/or coexisting conditions which may present overlapping symptoms with ADHD (SEE* OVERLAPPING SYMPTOMS WITH ADHD for further details):
  - Developmental disorder
  - Learning disability
  - Past medical history
  - Trauma disorder
  - Anxiety disorder
  - Medical illness
  - Sleep disorder
  - Other potential conditions with overlapping symptoms

Negative Screening

If not consistent with ADHD: attempt to identify any other possible causes of presenting behaviors and treat accordingly. If not within scope of practice, specialist referral/consultation may be warranted.

No

Confirmed diagnosis of ADHD?

Yes

- Educate caregivers/patients about nonpharmacologic treatment strategies and initiate where appropriate
- Evaluate if the patient is a candidate for pharmacological treatment. (See* ADHD PHARMACOLOGICAL TREATMENT RECOMMENDATIONS)
- Ensure treatment of coexisting conditions.
- Refer to specialist, if needed, for more complex cases with increased severity of symptoms.

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DSM-5-TR Criteria for Attention-Deficit/Hyperactivity Disorder (ADHD)

A persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development, as characterized by (1) and/or (2):

1. Inattention: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.

a. Often fails to give close attention to details or makes careless mistakes in schoolwork, at work, or during other activities (e.g., overlooks or misses details, work is inaccurate).
b. Often has difficulty sustaining attention in tasks or play activities (e.g., has difficulty remaining focused during lectures, conversations, or lengthy reading).
c. Often does not seem to listen when spoken to directly (e.g., mind seems elsewhere, even in the absence of any obvious distraction).
d. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (e.g., starts tasks but quickly loses focus and is easily sidetracked).
e. Often has difficulty organizing tasks and activities (e.g., difficulty managing sequential tasks; difficulty keeping materials and belongings in order; messy, disorganized work; has poor time management; fails to meet deadlines).
f. Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (e.g., schoolwork or homework; for older adolescents and adults, preparing reports, completing forms, reviewing lengthy papers).
g. Often loses things necessary for tasks or activities (e.g., school materials, pencils, books, tools, wallets, keys, paperwork, eyeglasses, mobile telephones).
h. Is often easily distracted by extraneous stimuli (for older adolescents and adults, may include unrelated thoughts).
i. Is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents and adults, returning calls, paying bills, keeping appointments).

2. Hyperactivity and impulsivity: Six (or more) of the following symptoms have persisted for at least 6 months to a degree that is inconsistent with developmental level and that negatively impacts directly on social and academic/occupational activities:

Note: The symptoms are not solely a manifestation of oppositional behavior, defiance, hostility, or a failure to understand tasks or instructions. For older adolescents and adults (age 17 and older), at least five symptoms are required.

a. Often fidgets with or taps hands or feet or squirms in their seat.
b. Often leaves seat in situations when remaining seated is expected (e.g., leaves his or her place in the classroom, in the office or other workplace, or in other situations that require remaining in place).
c. Often runs about or climbs in situations where it is inappropriate. (**Note:** In adolescents or adults, may be limited to feeling restless.)
d. Often unable to play or engage in leisure activities quietly.
e. Is often "on the go," acting as if "driven by a motor" (e.g., is unable to be or uncomfortable being still for extended time, as in restaurants, meetings; may be experienced by others as being restless or difficult to keep up with).
f. Often talks excessively.
g. Often blurts out an answer before a question has been completed (e.g., completes people's sentences; cannot wait for their turn in conversation).
h. Often has difficulty waiting his or her turn (e.g., while waiting in line).
i. Often interrupts or intrudes on others (e.g., butts into conversations, games, or activities; may start using other people's things without asking or receiving permission; for adolescents and adults, may intrude into or take over what others are doing).
j. Several inattentive or hyperactive-impulsive symptoms were present prior to age 12 years.
k. Several inattentive or hyperactive-impulsive symptoms are present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities).
l. There is clear evidence that the symptoms interfere with, or reduce the quality of, social, academic, or occupational functioning.
m. The symptoms do not occur exclusively during the course of schizophrenia or another psychotic disorder and are not better explained by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, personality disorder, substance intoxication or withdrawal).

Specify whether:

- **(F90.2) Combined presentation:** If both Criterion A1 (inattention) and Criterion A2 (hyperactivity-impulsivity) are met for the past 6 months.
- **(F90.0) Predominantly inattentive presentation:** If Criterion A1 (inattention) is met but Criterion A2 (hyperactivity-impulsivity) is not met for the past 6 months.
- **(F90.1) Predominantly hyperactive/impulsive presentation:** If Criterion A2 (hyperactivity-impulsivity) is met and Criterion A1 (inattention) is not met for the past 6 months.

Specify if:

- **In partial remission:** When full criteria were previously met, fewer than the full criteria have been met for the past 6 months, and the symptoms still result in impairment in social, academic, or occupational functioning.

Specify current severity:

- **Mild:** Few, if any, symptoms in excess of those required to make the diagnosis are present, and symptoms result in no more than minor impairments in social or occupational functioning.
- **Moderate:** Symptoms or functional impairment between "mild" and "severe" are present.
- **Severe:** Many symptoms in excess of those required to make the diagnosis, or several symptoms that are particularly severe, are present, or the symptoms result in marked impairment in social or occupational functioning

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Risk Reduction Strategies for the Treatment of Attention-Deficit/Hyperactivity Disorder (ADHD)

Risk Screenings

Prescreening Tools (adolescents and adults)

- AUDIT-C Questionnaire, NIDA Quick Screen, TAPS-1 Screening Tool, NIAAA Screening Tool

Full Assessment Tools (adolescents and adults)

- CAGE Questionnaire, ASSIST Questionnaire© MAST Screening Tool, DAST© Screening Tool, TAPS-2 Assessment, CRAFFT© Screening Tool, BSTAD Screening Tool, S2BI© Screening Tool

Drug Testing

- Urine drug screening/testing
- Blood
- Saliva

Prescription Drug Monitoring Program (PDMP)

- All practitioners who prescribe controlled substances must register with the West Virginia Controlled Substance Monitoring Program (CSMP)
- All dispensed controlled medications must be reported to the West Virginia Board of Pharmacy CSMP each 24-hour period and documented to the patient's medical record
- Per West Virginia Code 60A-9-5a, section b: the CSMP must be checked upon initiation of controlled substance, and yearly
- Recommended: Utilize CSMP data with each new prescription and every 3 months for high-risk patients

Patient and Provider Agreements

- Risk versus benefit counseling
- Drug interaction review
- Monitoring of refill requests
- Medication storage and disposal techniques
- Drug diversion consequences
- Pill counts as needed

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National Institute on Drug Abuse (NIDA) Screening Tools Chart

	Substance		Patient Age		How Tool is Administered	
Tool	**Alcohol**	**Drugs**	**Adults**	**Adolescents**	**Self-administered**	**Clinician-administered**
Screens						
Screening to Brief Intervention (S2BI)	X	X		X	X	X
Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD)	X	X		X	X	X
Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS)	X	X	X		X	X
Alcohol Screening and Brief Interventions for Youth: A Practitioner's Guide (NIAAA)	X			X		X
Opioid Risk Tool – OUD (ORT-OUD) Chart		X	X		X	
Assessments						
Tobacco, Alcohol, Prescription medication, and other Substance use (TAPS)	X	X	X		X	X
CRAFFT©	X	X		X	X	X
Drug Abuse Screen Test (DAST-10)© For use of this tool, please contact Dr. Harvey Skinner		X	X		X	X
Drug Abuse Screen Test (DAST-20 Adolescent version)© For use of this tool, please contact Dr. Harvey Skinner		X		X		X
Alcohol Screening and Brief Interventions For Youth: A Practitioner's Guide (NIAAA)	X			X		X

References for: NIDA Screening Tools Chart

National Institute on Drug Abuse (NIDA). (2023, January 6). *Screening and Assessment Tools Chart*. https://nida.nih.gov/nidamed-medical-health-professionals/screening-tools-resources/chart-screening-tools

Urine Drug Screening & Testing

Urine Drug Screens (UDS)	Urine Drug Testing (UDT)
Immunoassay screen	GC-MS or LC-MS/MS
In-office, point of care, or lab-based	Laboratory
Results within minutes	Results within hours or days
Detects some legal and illicit medications by structural class	Measures concentrations of all medications, illicit substances and metabolites
Guidance for preliminary treatment and decisions	Definitive identification and analysis
Cross-reactivity common	False positive results are rare
More false negatives	False negatives are rare
$	$$$

Target Drug Screen	Potential Agents Causing False Positives
Amphetamine/Methamphetamine	Amantadine, bupropion, chlorpromazine, desipramine, dextroamphetamine, ephedrine, labetalol, MDMA, Vicks® levomethamphetamine inhaler, methylphenidate, phentermine, phenylephrine, promethazine, pseudoephedrine, ranitidine, selegiline, trazodone
Benzodiazepines	Oxaprozin and sertraline
Cannabinoids	Dronabinol, efavirenz, hemp, NSAIDS, proton pump inhibitors, tolmetin
Cocaine	Coca leaf, tropical cocaine anesthetics
Opioids	Dextromethorphan, diphenhydramine, poppy seeds, quinine, quinolones, rifampin, verapamil
Phencyclidine	Dextromethorphan, diphenhydramine, doxylamine, ibuprofen, ketamine, meperidine, tramadol, and venlafaxine

**The above chart is a summary of common agents and not a comprehensive list.*

Stimulant	Detection
Dextroamphetamine (Adderall, Dexedrine, Dextrostat, Xelstrym, Zenzedi)	Amphetamine
Lisdexamfetamine (Vyvanse)	Amphetamine
Methamphetamine (Desoxyn, Crystal Meth)	Amphetamine/Methamphetamine*
Benzphetamine (Didrex)	Amphetamine
Methylphenidate (Concerta, Daytrana, Metadate, Methylin, Ritalin)	Ritalinic Acid
Dexmethylphenidate (Focalin)	Ritalinic Acid
Phentermine	Phentermine

**Further confirmatory testing of d and l isomers of methamphetamine may be required to determine if results are falsely positive due to use of over-the counter products containing l-methamphetamine*

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Prescription Drug Monitoring Program (PDMP)

West Virginia's Controlled Substance Monitoring Program (CSMP)

- To register, assign delegate access, or log-in, visit: https://www.csappwv.com/Account/Login.aspx

- All practitioners who prescribe or dispense Schedule II, III, IV, or V controlled substances shall register with the West Virginia CSMP and maintain online, or other electronic access to the program database.

- All licensed prescribers must check the CSMP when initially prescribing a Schedule II controlled substance, any opioid, or any benzodiazepine for a patient not suffering from a terminal illness and at least annually thereafter if treatment is continued.

- "Best Practice" - Check the CSMP when a new prescription is provided, or at least every 3 months.

- All information found from the CSMP must be documented in the patient's medical record at private prescriber practices and inpatient facilities.

- All licensees who dispense Schedule II, III, IV, and V controlled substances to residents of West Virginia must provide the dispensing information to the West Virginia Board of Pharmacy each 24-hour period.

- For more information on CSMP laws: https://www.wvlegislature.gov/wvcode/code.cfm?chap=60A&art=9

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ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD) PRESCRIPTION STIMULANT CONVERSION AID

The ADHD Medication Conversion Aid is not an all-inclusive list of strengths and dose conversions from one medication to another medication, the chart is intended to be an aid for how to make these mathematical conversions based on available evidence from expert consensus, journal articles, product labeling, and online dose calculators.

Note that the dosing provided does not account for pharmaceutical labeling indications such as age. Please consult labeling for dose recommendations based on age.

New medication total daily doses may need to be rounded to the nearest available strength or rounded as clinically appropriate by the prescriber. Also, total daily dose may be dosed in partial tablets depending on the dose. For example, Ritalin (methylphenidate IR) is available in 5, 10, and 20 mg doses, a dose of 8mg after conversion can be rounded up to 10 mg or rounded down, and the patient be given 1 and ½ tablets of 5 mg resulting in a 7.5 mg dose. Clinical judgment must be utilized independently of this aid when deciding whether to round up or down when dosing or titrating a medication.

Be aware to check product labeling for medications that can or cannot be crushed/split.

This chart should not replace clinical judgment, it is only to be used as an aid. Medication doses should be based on a wide variety of factors including body weight, patient age, severity of symptoms, response to medication or previous medications, medication duration of action, concurrent medications, comorbid conditions, and patient specificity (e.g., sex, ethnicity, age etc.).

For a more detailed and accurate approach to converting between ADHD medication products and the methodology of conversion factors see “Guidance for Off-Label Conversions.”

Attention-Deficit/Hyperactivity Disorder (ADHD) Medication Conversion Aid*				
Current Medication	**Current Total Daily Dose (mg/day)**	**Conversion Factor**	**New Medication**	**Total Daily Dose (mg/day)**
Amphetamine Salts				
Mixed Amphetamine Salts Immediate-Release (IR)/ Extended-Release (ER)	20 mg	1	**Mixed Amphetamine Salts IR/ER**	20 mg (may divide IR dose in 1 to 3 equally divided doses)
	20 mg	2	**Methylphenidate HCl IR/ER**	40 mg* (may divide IR dose in 1 to 3 equally divided doses)
*Alternatively, consider switching amphetamines to methylphenidate at the same dose and titrating up				
Mixed Amphetamine Salts IR/ER	20 mg	2.5	**Vyvanse** (lisdexamfetamine dimesylate)	50 mg
Mixed Amphetamine Salts IR/ER	20 mg	0.625	**Adzenys XR-ODT, Adzenys ER (amphetamine) ODT-XR tablet and ER oral suspension**	12.5 mg
Adzenys XR-ODT, **Adzenys ER (amphetamine)** **ODT-XR tablet and ER oral suspension**	12.5 mg	1.6	**Mixed Amphetamine Salts IR/ER**	20 mg(may divide IR dose in 1 to3 equally divided doses)
Lisdexamfetamine				
Vyvanse (lisdexamfetamine dimesylate)	10 mg	~0.77	**Methylphenidate HCl IR/ER**	7.7 mg* (may divide IR dose in 1 to 3 equally divided doses)
Vyvanse (lisdexamfetamine dimesylate)	50 mg	0.4 - 0.6	**Mixed Amphetamine Salts IR/ER**	25 mg* (may divide IR dose in 1 to 3 equally divided doses)

Attention-Deficit/Hyperactivity Disorder (ADHD) Medication Conversion Aid*				
Current Medication	**Current Total Daily Dose (mg/day)**	**Conversion Factor**	**New Medication**	**Total Daily Dose (mg/day)**
Methylphenidate and Derivatives				
Aptensio XR (methylphenidate HCl) capsule	10 mg	1	**Methylphenidate HCl IR/ ER**	10 mg (may divide IR products in 1 to 3 equally divided doses)
Dexmethylphenidate HCl IR/ ER	10 mg	2	**Methylphenidate HCl IR/ ER**	20 mg (may divide IR products in 1 to 3 equally divided doses)
		1	**Dexmethylphenidate HCl IR/ER**	10 mg (may divide IR products in 1 to 3 equally divided doses)
Methylphenidate HCl IR	15 mg (may divide IR dose in 1 to 3 equally divided doses)	~0.67	**Daytrana** (methylphenidate transdermal) patch	10 mg/ 9 hr wear time
Daytrana (methylphenidate transdermal) patch	10 mg/ 9 hr wear time	1.5	**Methylphenidate HCl IR**	15 mg (may divide IR dose in 1 to 3 equally divided doses)
Methylphenidate HCl IR/ER	20 mg	0.5	*The conversion of methylphenidate to dextroamphetamine/amphetamine is done at approximately ½ the dose of methylphenidate. However, it may be reasonable for children who are already receiving ≥ 20 mg/day methylphenidate to convert to dextroamphetamine-amphetamine at a starting dose of 10 mg once per day and titrate based on response.	
		1.3	**Vyvanse** (lisdexamfetamine dimesylate)	26 mg* (available in 20 mg, 30 mg)
Concerta (methylphenidate osmotic release) ER tablets	18 mg	~0.56	**Daytrana** (methylphenidate transdermal) patch	10 mg/ 9 hr wear time
Daytrana (methylphenidate transdermal) patch	10 mg/ 9 hr wear time	1.8	**Concerta** (methylphenidate osmotic release) ER tablets	18 mg

The recommendation for the following medications is to start with the initial dose and titrate when switching due to pharmacokinetics and salt form differences*

Adhansia XR
Adzenys XR-ODT
(if switching to another product other than Adderall XR)
Azstarys
Dyanavel XR
Evekeo ODT
Jornay PM
Mydayis
QuilliChew ER
Quillivant XR

** Please refer to A West Virginia Guide to Evidence-Informed Evaluation, Diagnosis, and Treatment of Attention-Deficit/Hyperactivity Disorder (ADHD) and comorbid Concerns (The WV ACC Guidelines), available at www.WVADHD.org for a full list of disclaimers (page 4) and references for the content contained in this handout.*

Overlapping Inattentive Symptoms with Attention-Deficit/Hyperactivity Disorder (ADHD)

Inattentive Symptoms	Diagnosis								
	ADHD	GAD	MDD	BP	ASD	TSD	LD	ODD	ID
Frequently overlooks details or making careless mistakes	X	X	X	X	X	X	X		X
Often has difficulty maintaining focus on one task or play activity	X	X		X		X	X		X
Often appears not to be listening when spoken to, including when there is no obvious distraction	X	X	X	X	X	X		X	X
Frequently does not finish following instructions, failing to complete tasks	X		X	X	X	X	X	X	X
Often struggles to organize tasks and activities, to meet deadlines, and to keep belongings in order	X		X	X	X	X			X
Is frequently reluctant to engage in tasks that require sustained attention	X								
Frequently loses items, including those required for tasks	X			X					X
Is frequently easily distracted by irrelevant things, including thoughts in adults and teenagers	X	X	X	X	X	X			
Often forgets daily activities, or is forgetful while completing them	X		X	X					X

Overlapping Hyperactive-Impulsive Symptoms with Attention-Deficit/Hyperactivity Disorder (ADHD)

Hyperactive-Impulsive Symptoms	Diagnosis								
	ADHD	GAD	MDD	BP	ASD	TSD	LD	ODD	ID
Is often fidgeting or squirming in seat	X	X		X		X			
Frequently has trouble sitting still during dinner, homework, at work, etc.	X	X		X					
Frequently runs around in inappropriate situations: In adults and teenagers, this may be present as restlessness	X	X		X					
Often cannot quietly engage in leisure activities or play	X			X					
Frequently seems to be in constant motion, or uncomfortable when not in motion	X	X		X					
Often talks too much	X			X		X			
Often answers a question before it is finished, or finishes people's sentences	X				X				
Often struggles to wait his or her turn, including waiting in lines	X			X	X			X	
Frequently interrupts or intrudes, including into others' conversations or activities, or by using people's things without asking	X			X	X			X	

KEY

ABBREVIATION	DISORDER
ADHD	Attention-Deficit/Hyperactivity Disorder
GAD	Anxiety Disorders
MDD	Depressive Disorders (Unipolar or Bipolar)
BP	Bipolar Disorder (Mania or Hypomania)
ASD	Autism Spectrum Disorder
TSD	Trauma-and-Stressor-Related Disorders
LD	Learning Disorders
ODD	Oppositional Defiant Disorder
ID	Intellectual Disability
SUD	Substance Use Disorders
SD	Sleep Disorders

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See the back of this handout for additional clarification of the distinguishing factors for each disorder.

The WV ACC Guidelines can be found at **wvadhd.org**

Differentiating ADHD From Other Diagnoses	
Diagnosis	**Distinguishing Factors**
Anxiety	One of the core symptoms of many anxiety disorders is difficulty concentrating or maintaining attention. Individuals with anxiety are inattentive because their focus is turned inward by worry or rumination. In contrast, those with ADHD struggle with inattention and distractibility because their attention is drawn outward by novel stimuli or excessively held by pleasurable activities. Additionally, individuals with anxiety often engage in restless behaviors that can mimic hyperactivity.
Depressive Disorders (Unipolar or Bipolar)	Individuals with depressed mood frequently experience poor concentration. However, the symptoms of depression are episodic rather than continuous, and diminished concentration will occur alongside other depressive symptomatology, such as changes in sleep patterns, appetite, feelings of guilt, and anhedonia. The symptoms of ADHD, on the other hand, are not episodic and are present at some level most or all the time.
Bipolar Disorders (Mania or Hypomania)	Increased energy, poor concentration, distractibility, and impulsivity are core symptoms of manic or hypomanic mood states. However, elevated mood states occur as discrete episodes that are a change from the patient's baseline behavior. In contrast, those with ADHD display symptoms on a more continuous basis. Further, those with mania or hypomania will display other symptoms consistent with their mood disorder, such as grandiosity, decreased need for sleep, racing thoughts, or risk-taking behavior out of the norm from their baseline.
Autism Spectrum Disorder	Those with Autism Spectrum Disorder (ASD) display symptomatology that involves impairment in social skills, communication, restricted interests, and repetitive behaviors. There can be broad differences in symptom severity within this group. In addition, some children with ASD have intellectual and/or language impairments as well. Many of their symptoms can look like those seen in ADHD. Communication or social skill deficits can be mistaken for inattentiveness to conversation or instructions. A strong desire to preferentially engage with restricted interests can be misinterpreted as lack of attention or distractibility. Stereotyped behaviors can be misunderstood as hyperactive behavior.
Trauma- and Stressor-related Disorders	Individuals with trauma-related disorders often struggle with attentiveness and sustained concentration. This can be due to recurrent and intrusive memories, dissociative states that negatively impact awareness of situations or surroundings, or diminished interest in activities. Trauma-related symptoms, by definition, have an onset following a traumatic event and are often triggered or worsened following exposure to reminders of the event. In contrast, ADHD symptoms may worsen under certain situations but are mostly non-contextual.
Learning Disorders	Children with specific learning disorders are often inattentive when engaged in learning activities related to their area of disability. However, they do not show attention deficits with other tasks, and they are not more hyperactive or impulsive than their peers. In contrast, by definition, children with ADHD struggle with symptoms across more than one setting. ADHD is commonly comorbid with learning disorders.
Oppositional Defiant Disorder	Those with Oppositional Defiant Disorder (ODD) display argumentativeness and defiance toward adult authority figures solely out of a desire to resist conforming to rules or demands. The child with ADHD, on the other hand, is more likely to resist requests related to academic or mentally demanding tasks. Alternatively, failure to follow through with tasks in ADHD can be secondary to forgetfulness, distractibility, or impulsivity. Annoying others is common to both conditions, but for those with ODD, this behavior is typically deliberate, while for those with ADHD, the annoyance may be more of an unintended consequence of their symptoms. ADHD and ODD commonly co-occur.
Intellectual Disability	Individuals with intellectual disability can struggle with attention if placed in academic settings that are not commensurate with their intellectual level. Outside of these settings, however, their ability to focus will be on par with their mental age. Those with ADHD will struggle with attentional tasks across multiple settings to include non-academic situations.
Other Conditions	
Substance Use Disorders	Many substances, either prescription or illegal, can cause similar symptoms to ADHD, either during intoxication or withdrawal states. For example, alcohol intoxication can cause inattentive and impulsive behavior while intoxication with stimulants, such as cocaine or methamphetamine, can lead to hyperactivity and impulsivity. A comprehensive list of substances and their effects is well beyond the scope of this document. If substance use is infrequent then hyperactive, impulsive, and inattentive symptoms should mostly be confined to periods of use or withdrawal. However, differentiating ADHD from substance use can be challenging if use is very frequent. A clear history of onset of ADHD symptoms prior to the onset of drug use or during sustained periods of sobriety is key.
Sleep Disorders	Sleep disorders such as insomnia, sleep-disordered breathing, circadian rhythm sleep disorders, narcolepsy, and others can lead to insufficient sleep or sleep fragmentation. This can result in disturbances of mood, behavior, and attention that can resemble many of the symptoms of ADHD. Attentional and behavioral symptoms that chronologically begin after onset of the sleep disorder are unlikely to be related to ADHD. ADHD and sleep disorders often co-occur, sometimes as a consequence of stimulant therapy or due to poor bedtime routines seen with many children who have ADHD.

References for Overlapping Symptoms With ADHD

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