



Management of Pediatric Attention Deficit & Hyperactivity Disorder (ADHD)

Clinical Practice Guideline MedStar Health

“These guidelines are provided to assist physicians and other clinicians in making decisions regarding the care of their patients. They are not a substitute for individual judgment brought to each clinical situation by the patient’s primary care provider in collaboration with the patient. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication but should be used with the clear understanding that continued research may result in new knowledge and recommendations”.

NOTE: This new guideline includes only incremental updates to the previous guideline of 2011. On such update is the addition of a **key action statement (KAS)** about the diagnosis and treatment of coexisting or comorbid conditions in children and adolescents with ADHD.

INTRODUCTION

The essential feature of attention-deficit/hyperactivity disorder (ADHD) is a persistent pattern of inattention and/or hyperactivity-impulsivity that interferes with functioning or development. (AAP, DSM- V p 99 https://docs.google.com/file/d/0B_xpcySB9uWfejF1S0xILU95Y2M/edit). The prevalence of Attention-Deficit/Hyperactivity Disorder is estimated at 8% in school-age children.

Data on prevalence in adolescence and adulthood however are limited. Usually, the disorder is first diagnosed during elementary school years, when school adjustment is compromised. In the majority of cases seen in clinical settings, the disorder is relatively stable through early adolescence.

The primary care provider should recognize that ADHD is a chronic condition and therefore consider children and adolescents with ADHD as children and youth with special health needs. Care of such children should utilize the principles of medical home and chronic care models to guide treatment. **(KAS 4)**

Summary of Recommendations

Evaluation

The primary care provider should evaluate a child 4-18 years old who present with academic and behavioral problems accompanied by reported symptoms of inattention, hyperactivity, or impulsivity. **(KAS 1)** The provider should first determine that diagnostic criteria are met as defined by American Psychiatric Association, 2013, Diagnostic and Statistical Manual of Mental Disorders – 5th Edition (https://docs.google.com/file/d/0B_xpcySB9uWfejF1S0xILU95Y2M/edit). documenting impairment of the child in more than one setting (e.g. school and home).

The provider should also utilize supporting documents utilizing a validated instrument such as the Vanderbilt Assessment (<http://www.nichq.org/childrens-health/adhd/resources/adhd-toolkit>) from schools, mental health providers, teachers, guardians, parents, and/or other school clinicians/other significant adults. **(KAS 2)** Assessment for the coexistence of other conditions such as emotional, behavioral, developmental, or physical disorders (e.g. anxiety, depression, oppositional defiance, conduct disorder, substance use, learning or language disorders, neurodevelopmental disorders, autism spectrum disorders, tics, sleep apnea, etc.). **(KAS 3)**

Consider psycho-educational testing as a part of the evaluation process for ADHD. Requesting an Individualized Education Plan through the public-school system is a part of the individuals with disabilities education act (IDEA). A parent educational handout is available via the above NICHQ link "Educational Rights for children with ADHD".

Careful consideration should be given to rule out any other possible causes such as undetected seizure conditions, middle ear infections resulting in hearing change or loss, undetected vision or hearing problems, medical conditions that may affect thinking and behavior, learning disabilities, or significant and sudden life changes such as death of a family member, a divorce, or parental job loss.

Please note that unless they previously received a diagnosis, to meet DSM-5 criteria for ADHD, adolescents must have some reported or documented manifestations of inattention or hyperactivity/impulsivity before age 12. Therefore, clinicians must establish that an adolescent had manifestations of ADHD before age 12 and strongly consider whether a mimicking or comorbid condition, such as substance use, depression and/or anxiety is present.

Clinicians should also be aware that adolescents are at greater risk for substance use. Certain substances, such as marijuana, can have effects that mimic ADHD. In addition, adolescents may also attempt to obtain stimulant medication to enhance performance (i.e., academic, athletic, etc.) by feigning symptoms.

Risk Factors for ADHD

Attention-Deficit/Hyperactivity Disorder has been found to be more common in the first-degree biological relatives of children with Attention-Deficit/Hyperactivity Disorder. Studies also suggest that there is a higher prevalence of Mood and Anxiety Disorders, Learning Disorders, Substance-Related Disorders, and Antisocial Personality Disorder in family members of individuals with Attention-Deficit/Hyperactivity Disorder.

Other causes of note are genetic predisposition, environmental factors, brain injuries, sugar, and food additives.

Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

- (1) six (or more) of the following symptoms of **inattention** 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:

Inattention

(a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or 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, 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, may include unrelated thoughts).

(i) is often forgetful in daily activities (e.g., doing chores, running errands; for older adolescents, returning calls, paying bills, keeping appointments).

- (2) six (or more) of the following symptoms of hyperactivity/impulsivity 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:

Hyperactivity

- (a) often fidgets with hands or feet or squirms in seat
- (b) often leaves seat in classroom or in other situations in which 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 excessively in situations in which it is inappropriate (in adolescents may be limited to subjective feelings of restlessness)
- (d) often has difficulty playing or engaging in leisure activities quietly
- (e) is often "on the go" or often acts 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

Impulsivity

- (g) often blurts out answers before questions have been completed
- (h) often has difficulty awaiting turn
- (i) often interrupts or intrudes on others (e.g., butts into conversations or games or activities; may start using other people's things without asking or receiving permission; for adolescents may intrude into or take over what others are doing).

B. Several hyperactive-impulsive or inattentive symptoms that caused impairment were present prior to age 12 years.

C. Some impairment from the symptoms is present in two or more settings (e.g., at home, school, or work; with friends or relatives; in other activities).

D. There must be clear evidence that the symptoms interfere with or reduce the quality of social, academic, or occupational functioning.

E. 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).

Treatment

Treatment of children and youth with ADHD vary depending on age:

1. Age 4-5 (preschool) – evidence-based parent and/or teacher administered behavior therapy is first line treatment and may consider prescribing a stimulant medication (methylphenidate) if the behavior interventions do not provide significant improvement and there is moderate to severe behavior continuing disturbance in the child's function. If behavioral treatment is not available, providers should weigh the risks of starting medication at an early age against the harm of delaying diagnosis and treatment. **(KAS 5a)**
2. Age 6-11 (elementary school) – providers should prescribe US FDA approved medication for ADHD and evidence-based parent and/or teacher administered behavior therapy as treatment, preferably both. Per AAP's 2019 guideline on ADHD, the evidence is particularly strong for stimulant medications and sufficient but not as strong for atomoxetine, extended release guanfacine, and extended release clonidine (in that order). Educational interventions and individualized instructional supports, including school environment, class placement, instructional placement, and behavioral supports, are necessary for any treatment plan and often include an Individualized Education Program (IEP) or a rehabilitation plan (504 plan). **(KAS 5b)**
3. Age 12-18 (adolescents) – the provider should prescribe US FDA approved medications for ADHD with the assent of the adolescent and may prescribe training interventions and/or behavior therapy as a treatment for ADHD, preferably both. Educational interventions and individualized instructional supports, including school environment, class placement, instructional placement, and behavioral supports, are necessary for any treatment plan and often include an Individualized Education Program (IEP) or a rehabilitation plan (504 plan). **(KAS 5c)**

Treatment recommendations taken from AAP ADHD guideline please access pg. 14-16 of AAP ADHD Guideline at <https://pediatrics.aappublications.org/content/144/4/e20192528>

The provider should titrate doses of medication for ADHD to achieve maximum benefit with minimum adverse effects. **(KAS 6)** Providers should also be cautioned that there is a risk of psychoactive drug interactions and should consult psychiatry on medications.

If providers are trained or experienced in diagnosing comorbid conditions, they may start treatment of these comorbid conditions or make a referral to an appropriate subspecialist for treatment. If the provider is not trained, the patient should be referred to an appropriate subspecialist to make the diagnosis and start treatment. **(KAS 7)**

See ADHD medication list (Appendix A)

PARENT EDUCATION

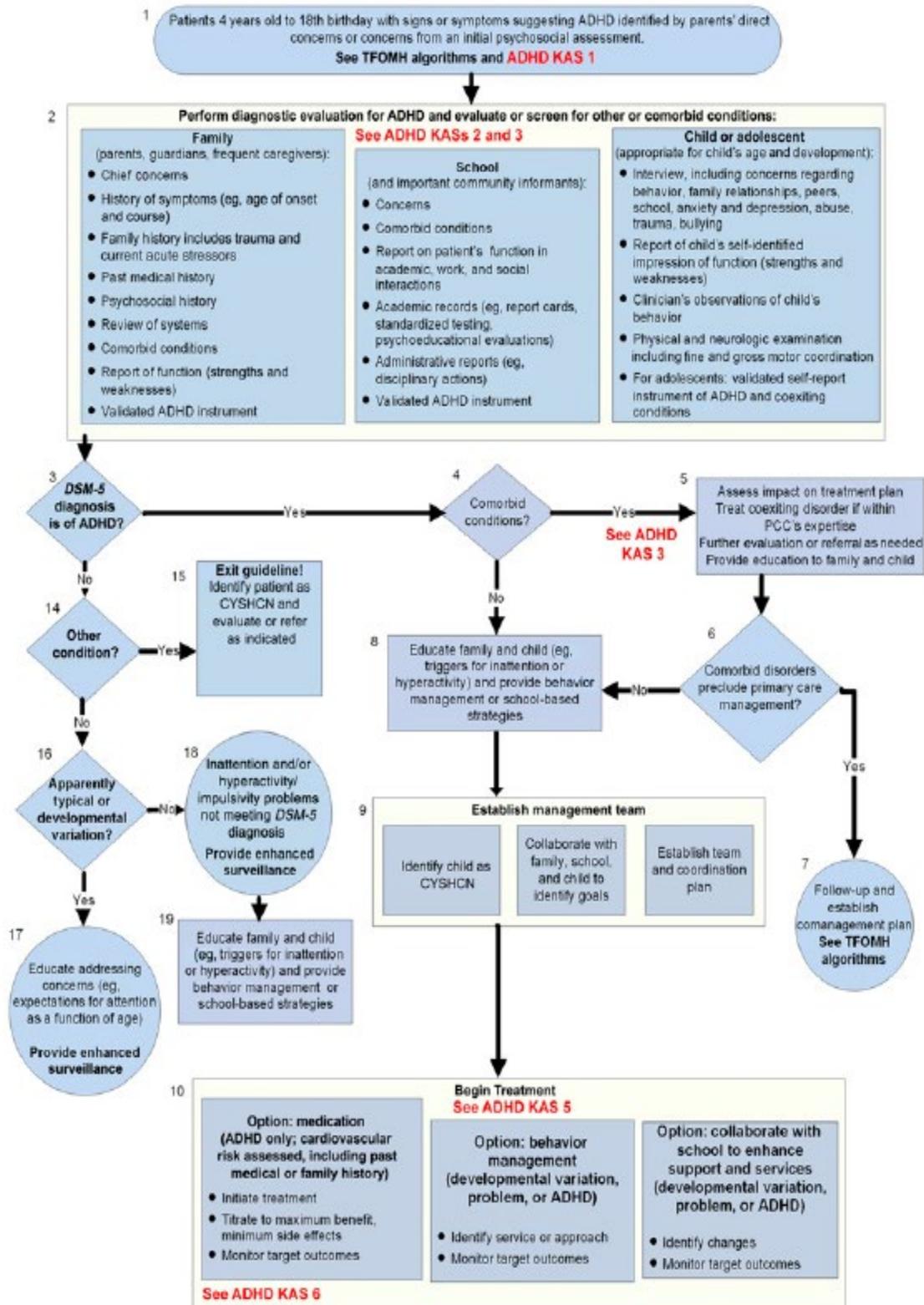
Education of parents is central to treatment and to ensure cooperation to reach goals. Parents should be warned that frequent titration of medication and/or change of medication is sometimes necessary to reach optimal medication management as well as successful treatment and may take several months to achieve.

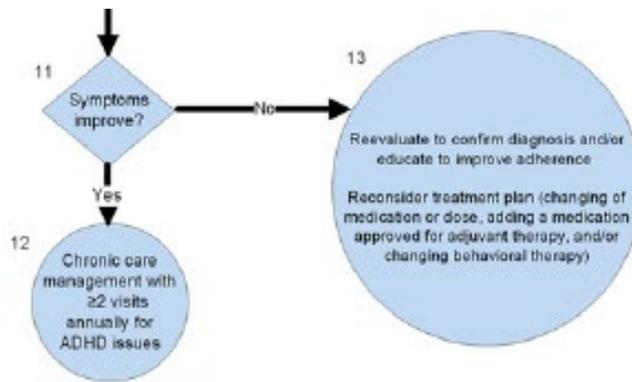
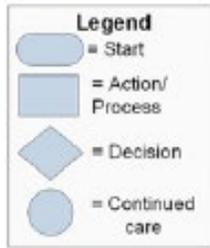
The AAP released new guidelines for treatment of ADHD in 2019 and were endorsed by the AAFP in 2019 and can be fully accessed at

<https://pediatrics.aappublications.org/content/144/4/e20192528>

CHADD/NICHQ Vanderbilt Assessment Tools can be found at

<http://www.nichq.org/childrens-health/adhd/resources/adhd-toolkit>





See ADHD KAS 4

AAP, 2019. ADHD process-of-care algorithm. *Pediatrics*. 2019;144(4). Retrieved from https://pediatrics.aappublications.org/content/pediatrics/suppl/2019/09/18/peds.2019-2528.DCSupplemental/PEDS_20192528SupplementaryData1.pdf

Appendix A

<u>ADHD Medications</u>				
<u>Product</u>	<u>Dosage Forms</u> <u>Cost/Month*</u>	<u>Duration of</u> <u>Action</u> <u>(approx)</u>	<u>Initial Dose</u>	<u>Max Daily</u> <u>Dose</u>
<u>Immediate Release (IR) Methylphenidate</u>				
<u>Ritalin</u> and generics	5, 10, 20 mg tabs \$53.40 (10 mg BID)	3 to 5 h	Initial (children 6 years and older): 5 mg BID to TID (AM, noon, 4 PM if needed), preferably 30 to 45 minutes before meals.	FDA: 60 mg
<u>Methylin Chewable Tabs</u> and generics	2.5, 5, 10 mg chewable tabs \$357.55 (10 mg BID)	3 to 5 h	Initial (children 6 years and older): 5 mg BID to TID (AM, noon, 4 PM if needed), preferably 30 to 45 minutes before meals.	FDA: 60 mg
<u>Methylin Oral Solution</u> and generics	5 mg/5 mL, 10 mg/5 mL oral solution \$357.83 (10 mg BID)	3 to 5 h	Initial (children 6 years and older): 5 mg BID to TID (AM, noon, 4 PM if needed), preferably 30 to 45 minutes before meals.	FDA: 60 mg
<u>Immediate Release (IR) dexmethylphenidate</u>				
<u>Focalin (Novartis)</u> and generics	2.5, 5, 10 mg tabs \$54.11 (5 mg BID)	3 to 5 h	Initial: 2.5 mg BID (children 6 yrs and older) 4 hours apart without regard to meals	FDA: 20 mg

Extended Release (ER) dexamethylphenidate

<u>Focalin XR</u> and generics	5, 10, 15, 20, 25, 30, 35, 40 mg caps \$289.66 (10 mg daily)	8 to 12 h	Initial: 5 mg (children 6 yrs and older) Given once daily in the morning. May be taken whole or sprinkled over applesauce. If sprinkled over applesauce, should be used immediately and not be stored for future use. Capsule and/or capsule content should not be crushed, chewed, or divided.	FDA: 30 mg
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Extended Release (ER) methylphenidate

<u>Ritalin LA</u> Bead-filled capsule (½ IR and ½ enteric coated, delayed release) plus generic	10, 20, 30, 40, 60 mg LA caps \$237.38 (20 mg daily)	6 to 9 h	Initial: 10 to 20 mg (children 6 yrs and older) Given once daily in the morning. May be taken whole or sprinkled on applesauce. Applesauce should not be warm. If sprinkled over applesauce, should be used immediately and not stored for future use. Capsule and/or capsule content should not be crushed, chewed, or divided.	FDA: 60 mg
<u>Metadate ER</u> Wax matrix tab	10, 20 mg ER tabs \$54.18 (20 mg daily)	2 to 8 h	Initial: 20 mg q AM for children tolerating 10 mg IR AM and noon Given once daily or BID. Must be swallowed whole.	FDA: 60 mg

<p><u>Metadate CD</u> Bead-filled capsule (30% IR and 70% ER) and generics</p>	<p>10, 20, 30, 40, 50, 60 mg ER caps \$206.56 (20 mg daily)</p>	<p>6 to 9 h</p>	<p>Initial: 20 mg (children 6 yrs and older) Given once daily in the morning before breakfast. May be taken whole or sprinkled over about a tablespoon of applesauce and taken immediately. Capsule/capsule content should not be crushed or chewed.</p>	<p>FDA: 60 mg</p>
<p><u>Concerta</u> OROS (osmotic system has hole for drug release) with IR overcoat plus generics</p>	<p>18, 27, 36, 54, 72 mg ER tabs \$291.29 (36 mg daily)</p>	<p>12 h</p>	<p>Initial: 18 mg (children 6 yrs and older) Titration: 18 mg (a 27 mg tablet is available for titration between 18 mg and 36 mg). Given once daily in the morning without regard to meals. Must be swallowed whole.</p>	<p>FDA: 54 mg children; 72 mg adolescents</p>
<p><u>Daytrana (Noven)</u> transdermal patch</p>	<p>1.1 mg/hr (10 mg/9 hr) 1.6 mg/hr (15 mg/9 hr) 2.2 mg/hr (20 mg/9 hr) 3.3 mg/hr (30 mg/9 hr) \$275.82 (all strengths)</p>	<p>12 h (with 9-h wear time)</p>	<p>Initial: 10 mg Titration: Next highest patch strength Dosing based on studies in children 6 to 17 years old. Worn daily for 9 hours (apply 2 hours before desired effect). Can be worn up to 16 hours if longer effect needed. Remove at least 3 hours before bedtime. Replace patch once daily in the morning. Apply to hip area. Change application site daily.</p>	<p>FDA: 30 mg</p>

<p><u>QuilliChew ER</u> cherry chewable tablet ER mechanism: drug is released from sodium polystyrene sulfonate particles via ion exchange. (30% IR, 70% ER)</p>	<p>20, 30, 40 mg chewable ER tabs (20 mg and 30 mg tabs are scored) \$270 (all strengths)</p>	<p>8 h</p>	<p>Initial (patients 6 yrs and older): 20 mg Given once daily in the morning, without regard to meals.</p>	<p>FDA: 60 mg</p>
<p><u>Quillivant XR (Pfizer)</u> oral suspension Contains approximately 20% IR and 80% ER methylphenidate.</p>	<p>5 mg/mL oral suspension \$192.94 (all sizes)</p>	<p>12 h</p>	<p>Initial: 20 mg (patients 6 yrs and older) Titration: 10 to 20 mg Pharmacist must reconstitute. Given once daily in the morning with or without food. Shake bottle vigorously for at least 10 seconds prior to dose. Measure dose with oral dosing dispenser provided. Store reconstituted suspension in original container at room temp for up to 4 months.</p>	<p>FDA: 60 mg</p>
<p><u>Aptensio XR</u> Capsules filled with multi-layered beads. IR layer contains 40% of the dose, controlled-release layer contains 60% of the dose. Peaks at two and eight hours post-dose.</p>	<p>10, 15, 20, 30, 40, 50, 60 mg caps \$195 (any strength daily)</p>	<p>12 h</p>	<p>Initial: 10 mg (patients 6 yrs and older) Given once daily in the morning, at a consistent time in regard to meals. May be taken whole or sprinkled on applesauce and taken immediately. Capsule/capsule content should not be crushed, chewed, or divided.</p>	<p>FDA: 60 mg</p>

<p><u>Cotempla XR-ODT</u> Administer consistently with or without food. Removed from blister pack with dry hands and administer immediately. Allow tablet to dissolve on tongue.</p>	<p>8.6 mg, 17.3 mg, and 25.9 mg oral disintegrating tablets \$445.20 (25.9 mg daily)</p>	<p>12 h</p>	<p>Start 17.3 mg once daily in morning, may titrate 8.6-17.3 mg at weekly intervals</p>	<p>FDA: 51.8 mg</p>
<p><u>Jornay PM</u> Administer in evening between 6:30-9:30 pm Delayed release formulation</p>	<p>20 mg, 40 mg, 60 mg, 80 mg, 100 mg tablets \$444 (40 mg daily)</p>	<p>~18 h 6 hr delay in release</p>	<p>Initiate 20 mg every evening, increase in 20 mg/day weekly intervals</p>	<p>FDA: 100 mg</p>
<p><u>Adhansia XR</u></p>	<p>25 mg, 35 mg, 45 mg, 55 mg, 70 mg, and 80 mg capsules \$359.40 (45 mg daily)</p>	<p>16 h</p>	<p>Initiate 25 mg once daily, may increase 10-15 mg increments every 5 days</p>	<p>FDA: 85 mg</p>
<p><u>Amphetamines</u></p>				
<p><u>Mixed amphetamine salts</u> Adderall - Brand immediate release discontinued. Generics available</p>	<p>5, 7.5, 10, 12.5, 15, 20, 30 mg tabs \$<34.56 (20 mg daily)</p>	<p>6 h (dose-dependent)</p>	<p>Initial: 2.5 mg once daily (3 to 5 yrs of age) or 5 mg once or twice daily (6 yrs and older) Given one to three times daily (usually once or twice daily) at four- to six-hour intervals.</p>	<p>FDA: 40 mg</p>

<p><u>Adderall XR</u> (mixed amphetamine salts extended-release capsule) or generics</p>	<p>5, 10, 15, 20, 25, 30 mg ER caps \$213.69 (any strength daily)</p>	<p>10 to 12 h</p>	<p>Initial: 5 to 10 mg (children 6 to 12 yrs old), 10 mg (adolescents) Given once daily in the morning without regard to meals. May be taken whole or sprinkled on applesauce and taken immediately. Capsule/capsule content should not be crushed, chewed, or divided.</p>	<p>FDA: 30 mg</p>
<p><u>Adzenys XR-ODT</u> (amphetamine extended-release orally disintegrating tablets)</p>	<p>3.1, 6.3, 9.4, 12.5, 15.7, 18.8 mg Tablet strengths reflect amount of amphetamine base. Pricing info N/A.</p>	<p>10 to 12 h</p>	<p>Initial: 6.3 mg q AM (6 to 17 yrs of age) Given once daily in the morning without regard to meals. Tablet is placed on tongue and allowed to disintegrate. Tablet should not be not chewed, crushed, or swallowed whole.</p>	<p>FDA: 18.8 mg (ages 6 to 12 yrs)⁴⁴ 12.5 mg (ages 13 yrs and older)</p>
<p><u>Adzenys ER</u> Oral solution</p>	<p>3.1 mg/2.5 mL solution</p>	<p>10 to 12 h</p>	<p>Initial: 6.3 mg once daily; may increase in 3.1-6.3 mg increments weekly</p>	<p>18.8 mg (age 6-12 years) 12.5 mg (age 13-17 years)</p>
<p><u>Dextroamphetamine</u> <i>Dextrostat</i> Brand discontinued; generics available</p>	<p>5, 10 mg tabs \$<174.97 (5 mg BID)</p>	<p>4 to 6 h</p>	<p>Initial: 2.5 mg q AM (3 to 5 yrs of age), 2.5 mg q AM and noon, or 5 mg q AM +/- noon dose (children 6 yrs and older) Given BID to TID. First dose upon awakening; additional doses at 4 to 6 hour intervals.</p>	<p>FDA: 40 mg, rarely higher</p>

<p><u>Dexedrine Spansule</u> (dextroamphetamine) or generics Bead-filled capsule (50% released immediately, 50% delayed release)</p>	<p>5, 10, 15 mg SR caps \$504.57 (any strength daily)</p>	<p>6 to 8 h</p>	<p>Initial: 5 mg q AM or BID (children 6 yrs and older) Usually once daily in the morning, or BID.</p>	<p>FDA: 40 mg, rarely higher</p>
<p><u>Dyanavel XR</u> (amphetamine ER suspension)</p>	<p>2.5 mg/mL oral suspension \$235.99 (10 mg daily)</p>	<p>at least 12 h</p>	<p>Initial: 2.5 to 5 mg (children 6 years and older) Given once daily in the morning without regard to meals. Shake bottle prior to dose.</p>	<p>FDA: 20 mg</p>
<p><u>Evekeo</u> (amphetamine [1:1 ratio of dextroamphetamine/ amphetamine])</p>	<p>5, 10 mg scored tabs 5 mg, 10 mg, 15 mg, and 20 mg oral disintegrating tablets \$324.38 (any strength BID)</p>	<p>at least 9.25 h</p>	<p>Initial: 2.5 mg once daily (children 3 to 5 yrs old) or 5 mg once or twice daily (children 6 yrs and older) Given one to three times daily. First dose upon awakening; additional doses at 4 to 6 hour intervals</p>	<p>FDA: 40 mg, rarely higher</p>
<p><u>ProCentra</u> (dextroamphetamine) or generic</p>	<p>1 mg/mL oral solution \$507.40 (5 mg BID)</p>	<p>4 to 6 h</p>	<p>Initial: 2.5 mg q AM (3 to 5 yrs of age), 2.5 mg q AM and noon, or 5 mg q AM +/- noon dose (children 6 yrs and older) First dose upon awakening additional doses at 4 to 6 hour intervals.</p>	<p>FDA: 40 mg, rarely higher</p>
<p><u>Vyvanse (Shire)</u> (lisdexamfetamine) Converted to active dextroamphetamine in the bloodstream.</p>	<p>10, 20, 30, 40, 50, 60, 70 mg caps 10 mg, 20 mg, 30 mg, 40 mg, 50 mg, 60 mg</p>	<p>10 to 12 h (up to 14 h, adults)</p>	<p>Initial: 30 mg (children 6 yrs and older and adults) Given once daily in the morning without regard to meals. May be taken whole or contents dissolved in water, yogurt, or</p>	<p>FDA: 70 mg</p>

	chewable tablets		orange juice and taken immediately	
	\$227.78 (any strength daily)			
<u>Zenzedi</u>	2.5 mg, 5 mg, 7.5 mg, 10 mg, 15 mg, 20 mg, 30 mg \$244.80 (all strengths once daily)	4-6 h	3-5 year olds: 2.5 mg once daily, increase by 2.5 mg increments at weekly intervals >6 years old: 5 mg once or twice daily, increase by 5 mg increments at weekly intervals	FDA: 40 mg
<u>Mydayis</u>	12.5 mg, 25 mg, 37.5 mg, and 50 mg capsule \$ 334.15 (all strengths once daily)	16 h	13-17 years: initiate 12.5 mg daily, increase by 12.5 mg increments at weekly intervals	FDA: 25 mg
<u>Nonstimulants</u>				
<u>Strattera</u> (atomoxetine) Response rate is lower compared to methylphenidate. Consider atomoxetine for patients with anxiety, tics, insomnia, or substance abuse disorders. Note psychiatric safety concerns .	10, 18, 25, 40, 60, 80, 100 mg caps \$365.70 (40 mg daily)	At least 10 to 12 h	Initial: 0.5 mg/kg/day (patients weighing up to 70 kg), or 40 mg/day (over 70 kg) Given once daily or divided BID (i.e., morning and late afternoon/early evening) without regard to meals	FDA: <u>children and adolescents up to 70 kg, lesser of 1.4 mg/kg or 100 mg; children and adolescents over 70 kg 100 mg</u>

<p><u>Kapvay</u> (Concordia) (clonidine extended-release) and generics</p> <p>May be a good alternative for children who are intolerant to stimulants (e.g., kids with tics, insomnia, etc). May be an add-on agent for children who do not receive enough benefit from stimulants alone (FDA approved for monotherapy or as an add-on to stimulants).</p>	<p>0.1, 0.2 mg extended-release tabs</p> <p>\$324.45 (0.1 mg BID)</p>	<p>At least 10 to 12 h</p>	<p>Initial: 0.1 mg at bedtime</p> <p>Titration: 0.1 mg</p> <p>Dosing based on studies in children 6 to 17 years of age.</p> <p>Tablets should not be crushed, chewed, or broken before swallowing. Do not substitute for other clonidine products on a mg-per-mg basis due to different pharmacokinetic profile. Doses above 0.1 mg/day should be divided twice daily with an equal or higher split dosage being given at bedtime. When discontinuing, taper the dose in decrements of no more than 0.1 mg every 3 to 7 days.</p>	<p>FDA: 0.4 mg</p>
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<p><i>Intuniv</i> (guanfacine) plus generics</p> <p>May be a good alternative for children who are intolerant to stimulants (e.g., kids with tics, insomnia, etc) or those with anxiety or aggression.</p> <p>Appears at least as effective as other nonstimulants.</p> <p>FDA approved for monotherapy or as an add-on to stimulants.</p>	<p>1, 2, 3, 4 mg extended-release tabs</p> <p>\$291.42 (any strength daily)</p>	<p>At least 8 to 12 h</p>	<p>Initial: 1 mg once daily</p> <p>Efficacy is evident at doses of 0.05 to 0.08 mg/kg once daily. Doses up to 0.12 mg/kg once daily may provide additional benefit.</p> <p>Dosing based on studies in children 6 to 17 years of age.</p> <p>Given once daily; avoid high-fat meals. Tablets should not be crushed, chewed, or broken. Do not substitute for immediate-release guanfacine tablets on a mg-per-mg basis due to different pharmacokinetic profiles. When discontinuing, taper the dose in decrements of no more than 1 mg every 3 to 7 days.</p>	<p>FDA: 7 mg</p> <p>Doses above 4 mg have not been evaluated in children 6 to 12 years of age.</p>
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*Cost = wholesale acquisition cost

Adapted from Comparison of ADHD Drugs. Pharmacist's Letter 2016: 32(3):32030

Additional resource which is updated regularly when new stimulants are available:

<http://www.adhdmedicationguide.com/>

Link to medication guide:

http://www.adhdmedicationguide.com/pdf/adhd_med_guide_112019%201429.pdf

and link to uses agreement and hard copy sale information for this table:

<http://www.adhdmedicationguide.com/>

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