



Treatment of ADHD in Children and Adolescents

May 1, 2026

Disclaimer: This article was published by the Medi-Cal Drug Use Review (DUR) Program and is not an official policy of the Department of Health Care Services (DHCS).

Learning Objectives

- Review recommendations provided by the American Academy of Pediatrics (AAP) Attention-Deficit/Hyperactivity Disorder (ADHD) expert panel on the diagnosis, evaluation, and treatment of ADHD in children and adolescents.
- Understand the pharmacological and non-pharmacological strategies for ADHD treatment, including specific recommendations by age group.
- Discuss first-line pharmacotherapy options for ADHD, including safety considerations, available formulations, and general treatment monitoring.
- Identify patients who may benefit from non-stimulant medications or combination therapy with multiple agents.

Key Points

- The AAP guidelines emphasize both pharmacological and non-pharmacological treatments for ADHD with specific recommendations stratified by age group, including preschool-aged children (4-5 years), school-aged children (6-11 years), and adolescents (12-18 years).
 - For preschool-aged children, evidence-based behavioral interventions are recommended as first-line treatment.
 - For school-aged children, medications approved by the U.S. Food and Drug Administration (FDA) for ADHD, alongside evidence-based behavioral interventions, are recommended as first-line treatment.
 - For adolescents, FDA-approved medications are also recommended as first-line treatment, with encouragement to add behavioral interventions if available.
- Stimulants are considered first-line pharmacotherapy due to higher efficacy compared with non-stimulant medications. Non-stimulant medications may be useful if stimulant medications are contraindicated or not tolerated, or to augment stimulant medications.
- Selection of ADHD medications should consider the patient's unique preferences, such as methods of administration, symptom profile, and tolerability.
- Many therapies for the treatment of ADHD are included in the *Medi-Cal Rx Contract Drugs List* (CDL) and are available to Medi-Cal members with a prescription.

Background

ADHD is the most common childhood-onset neurodevelopmental disorder, with core symptoms related to hyperactivity, impulsiveness, and inattention.¹ ADHD is a serious, chronic health condition that can have profound effects on children's academic performance, social relationships, and mental health.² Children with ADHD are at risk for adverse outcomes as they progress through adulthood, including substance use disorders (SUDs), difficulty obtaining employment, automotive accidents, incarceration, and even premature death.³ Treatment for ADHD has been shown to significantly reduce the risk of these adverse outcomes, as well as improve health-related quality of life and functional impairments.¹

According to data from the 2023-2024 [National Survey of Children's Health \(NSCH\)](#), an estimated 7% of children and adolescents in California and 11% nationwide have been diagnosed with ADHD.⁴ Rates of pediatric ADHD in California were significantly higher among males (8.9%) compared to females (5%).⁴ This finding aligns with established literature that shows boys are more likely to receive an ADHD diagnosis than girls.^{5,6} Researchers have identified several factors driving the difference in diagnosis rates, including misperceptions that ADHD mostly occurs in boys, a primary emphasis on hyperactive or impulsive behaviors, which may not be present in females, and the tendency for females to be misdiagnosed with internalizing conditions.^{6,7} Even after receiving a diagnosis of ADHD, girls are significantly less likely to receive treatment.^{4,7} Among children and adolescents with current ADHD, almost two-thirds were taking medication, approximately half had received behavioral treatment for ADHD in the past year, and nearly one quarter received neither type of treatment.⁴

Recommendations for Treatment of ADHD

The AAP has published clinical recommendations for the management of pediatric ADHD since 2000. Most recently, the AAP published the [Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents](#) (2019).⁸ In 2020, the Society of Developmental and Behavioral Pediatrics (SDBP) released a [guideline for the management of complex ADHD](#), including guidance for children younger than 4 years or older than 12 years of age who have co-occurring conditions, moderate to severe impairment, or an inadequate response to standard treatment.⁹

Although this article focuses on treatment recommendations, clinicians can refer to the full AAP guideline for more information on the diagnosis and initial evaluation of ADHD, including recommended screening protocols, preferred rating scales, symptom assessment, and when to refer patients to a specialist.

General Treatment Strategies by Age Group

Treatment of pediatric ADHD often requires a multimodal approach that is tailored to the individual based on patient-specific factors, such as age, administration preferences, and their unique symptom profile. The primary treatment methods include pharmacotherapy and behavioral interventions. The AAP guideline emphasizes the importance of pharmacological and behavioral interventions for all children and adolescents. Still, the preferred behavioral

interventions and recommended pharmacotherapy vary across the different stages of childhood development. For this reason, AAP provides specific recommendations stratified by age group, including for preschool-aged children (4-5 years), school-aged children (6-11 years), and adolescents (12-18 years).⁸ A summary of age-based recommendations for pharmacotherapy and behavioral interventions is shown in **Table 1**.

Table 1. Summary of Age-Based ADHD Treatment Recommendations

Age Group	ADHD Treatment Recommendations
Preschool (4-5 years)	<p>First-Line Treatment Approach: Evidence-based behavior therapy administered by a parent or teacher as first-line treatment.</p> <p>Medications: Methylphenidate may be added only if behavior therapy is unavailable or insufficient and impairment remains moderate to severe. The guideline emphasizes careful risk-benefit discussion before starting any medication.</p> <p>Dosing and Monitoring: Titrate from a low dose to maximum benefit with minimum adverse effects. Frequent medication monitoring recommended because of low tolerability in this age group.</p>
Elementary School (6-11 years)	<p>First-Line Treatment Approach: FDA-approved medications plus behavior therapy when possible.</p> <p>Medications: The strongest evidence exists for stimulants (such as methylphenidate and amphetamines). Non-stimulants (such as atomoxetine, ER guanfacine, and ER clonidine) have adequate but weaker evidence and are generally second-line treatments.</p> <p>Dosing and Monitoring: Titrate to maximum benefit with minimum adverse effects. Regular follow-up for symptom control, functioning, and side effects is recommended, though real-world adherence to frequent monitoring is often suboptimal.</p>
Adolescents (12-18 years)	<p>First-Line Treatment Approach: FDA-approved medications with adolescent assent; behavior therapy may be added, preferably both.</p> <p>Medications: Evidence supports stimulants and atomoxetine as effective; comparative data suggest amphetamines somewhat more efficacious than methylphenidate but with more side effects.</p> <p>Dosing and Monitoring: Titrate to maximum benefit with minimum adverse effects. Regular follow-up for symptom control, functioning, and side effects is recommended, though real-world adherence to frequent monitoring is often suboptimal.</p>

For preschool-aged children, evidence-based behavioral interventions are recommended as first-line therapy. AAP recommends that medication only be prescribed for preschool-aged children if behavior therapy is unavailable or impairment remains moderate-severe despite

behavioral interventions. Severity criteria are symptoms that have persisted for at least 9 months, dysfunction that occurs at home and other settings, and dysfunction that has not responded adequately to other interventions. If medications are started in preschool-aged children, methylphenidate is recommended as first-line pharmacotherapy because it has the strongest safety and efficacy data in this age group. There is insufficient data to support the use of non-stimulant ADHD medications or other stimulant products in preschool-aged children at this time. If methylphenidate is prescribed for preschool-aged children, the dose should be low at the start, given evidence that methylphenidate metabolism is slower in children 4 through 5 years of age and that younger children may be more likely to experience stimulant-related side effects. Clinicians should also note that maximum doses have not been adequately studied in preschool-aged children. Additionally, if medication is prescribed for preschool-aged children, AAP emphasizes a careful risk-benefit discussion with parents and close monitoring of therapy throughout treatment.⁸

For school-aged children, AAP recommends prescribing an FDA-approved medication for treatment of ADHD, alongside parent training in behavior management and school supports. For adolescents, an FDA-approved medication for ADHD is also recommended, with encouragement for evidence-based training, behavioral interventions, and instructional support depending on the individual's needs.⁸

Behavioral Interventions

There are a variety of behavioral interventions available for ADHD, including for the patient, parent, and educational support in school. The appropriateness and effectiveness of behavioral interventions for children with ADHD vary depending on the developmental level of the child. In preschool- and school-aged children, evidence-based parent training in behavior management (PTBM) and behavioral classroom interventions are highly effective. PTBM helps parents learn age-appropriate developmental expectations, behaviors that strengthen the parent-child relationship, and specific management skills for problem behaviors. Behavioral classroom interventions involve teacher-implemented strategies at the class-wide level and with the student individually, such as establishing daily goals for the child and providing daily feedback for parents and caregivers. Clinicians are encouraged to collaborate with the patient's school to help ensure that the patient receives appropriate school-based interventions.⁸

In general, as children mature into adolescence, it is important to involve them more centrally in the development and implementation of behavioral interventions. Adolescents' responses to PTBM are often more variable than in younger children. To improve efficacy among adolescents, PTBM may be modified to include the adolescent patient in training sessions rather than only parents. The goals of PTBM for adolescents should be to develop a behavioral contract and to improve parent-adolescent communication and problem-solving. Additional approaches shown to be beneficial for adolescents include motivational interviewing and school-based skills training. Organizational skills training (OST) teaches students to organize learning materials, track assignments, and plan work completion. The evidence for OST is not as strong as for PTBM and behavioral classroom interventions, but growing evidence suggests

it is effective for older school-aged children and adolescents (aged 9-18 years). OST is less appropriate and effective with younger children and is not recommended for this age group.^{8,9}

Behavioral interventions and psychoeducation should be reconsidered whenever patients enter a new developmental stage. Guidelines from the AAP and SDBP emphasize that clinicians should discuss the importance of behavioral interventions in ADHD treatment and direct patients to community or online resources, such as the [CHADD National Resource Center for ADHD](#).^{8,9} Parents can also refer to [Behavior Therapy for Children with ADHD – An Overview](#), created by the Centers for Disease Control and Prevention (CDC), to learn more about behavioral intervention techniques.

Pharmacological Therapy for ADHD

Pharmacological options are primarily divided into stimulant and non-stimulant medications. The mainstay of the pharmacologic treatment of ADHD is stimulant medications, which include methylphenidate and amphetamine preparations. No intervention is more effective in treating the core symptoms, with a 70% response rate in children on initial stimulant therapy and 90% responding after trying a different stimulant.⁸ Additionally, recent studies suggest that treatment with stimulant medications can reduce the risk of poor outcomes associated with ADHD, including criminality, suicidality, mood disorders, SUDs, traumatic brain injuries, motor vehicle crashes, injuries, and academic outcomes.¹⁰

The AAP recommends treatment with an FDA-approved medication for ADHD in children and adolescents. Due to the significantly higher efficacy seen with the use of stimulant medications compared with non-stimulants, the AAP currently recommends stimulants as first-line therapy for ADHD, with consideration of non-stimulant medications as alternative options for patients who have contraindications, cannot tolerate stimulants, or as an adjunctive therapy to stimulant medications for additional symptom control.⁸

Clinicians can refer to the [ADHD Medication Guide](#) for a helpful overview of medication options for ADHD, including stimulants and non-stimulants, short and long-acting formulations that are available, and dosing information.

Stimulants

Stimulant medications include variations of methylphenidate or amphetamine products. Although the neuropsychopharmacology of medications for ADHD is not completely understood, the stimulant medications work by increasing dopamine and norepinephrine signaling in the brain, particularly in areas that control attention and executive function.¹¹

A variety of stimulant formulations have become available, each with unique properties that allow for individualized treatment to meet the patient's specific needs, including varying time to onset, duration of effect, and ease of administration.^{8,11} The [Stimulant Medication Guide](#) provides more detailed information on the different methods of administration for both short- and long-acting stimulant products, as well as potential advantages and disadvantages for each formulation regarding ease of administration and tolerability. Several stimulant medications for ADHD are available on the CDL. Selected products on the CDL are listed in **Table 2**.

Table 2. Selected Stimulant Therapies for ADHD on the CDL *

Drug Class	Drug Names/Formulations	Notes
Methylphenidate Products	<ul style="list-style-type: none"> • Methylphenidate: <ul style="list-style-type: none"> – Immediate-release (IR) tablets – IR oral solution – Extended-release (ER) tablets – ER capsules, controlled delivery (CD) – ER capsules, long acting (LA) 	<ul style="list-style-type: none"> • IR tablets and solution are dosed 2-3 times daily, with a duration of 3-5 hours. • ER tablets are dosed 1 time daily, with a duration of 10-12 hours. • ER capsules (CD and LA) are dosed 1 time daily, with a duration of 6-8 hours. • ER capsules can be opened and sprinkled on apple sauce.
	<ul style="list-style-type: none"> • Dexmethylphenidate: <ul style="list-style-type: none"> – IR tablets – ER capsules 	<ul style="list-style-type: none"> • IR tablets are dosed 2 times daily, with a duration of 3-5 hours. • ER capsules are dosed 1 time daily, with a duration of 8-10 hours. • ER capsules can be opened and sprinkled on apple sauce.
	<ul style="list-style-type: none"> • Serdexmethylphenidate/ Dexmethylphenidate: <ul style="list-style-type: none"> – ER capsules 	<ul style="list-style-type: none"> • ER capsules are dosed 1 time daily, with a duration of 13 hours. • ER capsules can be opened and sprinkled in 2 oz water or applesauce.
Amphetamine Products	<ul style="list-style-type: none"> • Amphetamine, mixed salts: <ul style="list-style-type: none"> – IR tablets – ER capsules 	<ul style="list-style-type: none"> • IR tablets are dosed 1-3 times daily, with a duration of 4-6 hours. • ER capsules are dosed 1 time daily, with a duration of 10-12 hours. • ER capsules can be opened and sprinkled on apple sauce.
	<ul style="list-style-type: none"> • Dextroamphetamine sulfate: <ul style="list-style-type: none"> – IR tablets 	<ul style="list-style-type: none"> • IR tablets are dosed 1-3 times daily, with a duration of 4-6 hours.
	<ul style="list-style-type: none"> • Lisdexamfetamine Dimesylate: <ul style="list-style-type: none"> – ER capsules – Chewable tablets 	<ul style="list-style-type: none"> • ER capsules and chewable tablets are dosed 1 time daily, with a duration of 10-12 hours. • ER capsules can be opened and mixed with orange juice, water, or yogurt.

* For current information on covered products, refer to the [Contract Drugs & Covered Products Lists](#) page on the [Medi-Cal Rx Web Portal](#).

Common adverse effects of both methylphenidate and amphetamine include decreased appetite, dysphoria, irritability, and insomnia. Although these side effects are typically transient, they can persist and should be monitored and managed by adjusting the dose, formulation, or medication class. Heart rate (HR) and blood pressure (BP) should be monitored, although typically only small, clinically insignificant increases are observed. Patients with a family history of early cardiovascular disease or who have underlying cardiovascular conditions should receive a more thorough cardiac evaluation before starting stimulant therapy. Serious adverse effects, including the onset of acute anxiety states, tics, depression, psychosis, and mania can occur and necessitate prompt discontinuation of the offending agent and adjusting the treatment approach in a manner consistent with emergent symptoms.^{8,11}

Treatment with stimulants has been associated with small reductions in expected gains in height and weight in some patients. These effects are greatest for the tallest and heaviest children, with most studies finding a maximum reduction in growth of 1-2 cm. When growth deficits occur, they attenuate with time on treatment and reverse with discontinuation of stimulants. Although growth issues are not a problem for most individuals, growth should still be routinely monitored.^{8,9,12} **Table 3** provides a review of adverse effects associated with stimulant treatment and potential mitigation strategies.¹²

Table 3. Mitigation Strategies for Adverse Effects Associated with Stimulants

Adverse Effects	Mitigation Strategies
Increased BP or HR	<ul style="list-style-type: none"> • Monitor BP and HR at baseline and at each follow-up visit (every 3-6 months), as well as after any dose change. • Typical BP and HR changes are usually clinically insignificant (average increases: HR 1-2 beats per minute and 1-4 mm Hg for systolic and diastolic BP); however, consider further evaluation and/or therapy modifications if BP is higher than 130/80 on more than one occasion. • Modify therapy as needed if there is sustained resting tachycardia (more than 120 beats per minute) or arrhythmia.
Decreased appetite, weight loss, or growth restriction	<ul style="list-style-type: none"> • Monitor weight, height, and body mass index at baseline and at each follow-up visit (every 3-6 months). • There are several options to assist with weight loss or poor growth, including administering medication at or after meals, offering additional meals or snacks early in the morning or late in the evening after stimulant effects have worn off, consuming high-calorie, dense foods of good nutritional value, consulting with a dietician, considering an occasional drug holiday, or changing medication as needed.
Sleep disturbance	<ul style="list-style-type: none"> • Implement behavioral measures, such as sleep hygiene. • Consider reducing dosage, administering the dose earlier in the day, changing to an alternative stimulant formulation or class, or changing to or adding-on a non-stimulant option.
Dizziness	<ul style="list-style-type: none"> • Monitor BP and HR, ensure adequate fluid intake, consider longer-acting preparation.

Particularly in children, the response to stimulant therapy is variable and unpredictable. For this reason, it is recommended to titrate from a low dose to one that achieves a maximum, optimal effect in controlling symptoms without adverse effects. Calculating the dose in milligrams per kilogram has not usually been helpful because dose variations are not related to height or weight. In addition, because stimulant medications often produce immediate symptom improvement, titration can be accomplished in a relatively short time. Dose adjustments should be made stepwise, based on response and tolerability.⁸

Due to the variable duration of effective response to stimulant medications, therapeutic effects may wear off mid-day and require additional doses (or a longer-acting formulation) to control symptoms later in the day.^{8,11} One common strategy is to use a shorter-acting formulation of the same long-acting medication, dosed in the afternoon, to extend coverage as needed for each patient.^{8,11} Given the risks of driving for adolescents with ADHD, including crashes and motor vehicle violations, special concern should be taken to provide medication coverage for symptom control while driving.⁸

Before beginning medication treatment of adolescents with newly diagnosed ADHD, clinicians should also assess the patient for signs of substance use. If active substance use is identified, SUD should be addressed and treated either before or alongside any treatment for ADHD, incorporating behavioral interventions as part of a comprehensive treatment plan.⁸ If a stimulant is used to treat ADHD, clinicians should monitor the adolescent's symptoms and prescription refill requests for indications of misuse or diversion of ADHD medication, including by parents, classmates, or other acquaintances of the adolescent.⁸ Multiple longitudinal and population-based studies have found that pharmacologic treatment of ADHD is not associated with increased risk of SUD and may actually be associated with a reduced risk, likely through improved impulse control and reduced self-medication.^{12,13}

Nonstimulants

Non-stimulant ADHD medications provide a useful alternative for patients who cannot tolerate stimulants, have an incomplete response, or prefer to avoid them, as well as for those with a risk of misuse or diversion, contraindicating medical conditions, problematic side effects, or comorbidities such as bipolar disorder, psychosis, anxiety, or tic disorders. Non-stimulant medications can be used as monotherapy or added to a stimulant as an augmentation strategy. An additional advantage of the non-stimulants is the reduced risk of diversion or misuse.^{8,11}

Although non-stimulants were developed and approved as monotherapy for reducing the symptoms of ADHD, they also play a role as an adjunct to stimulant medication. Adjunctive treatment with a non-stimulant medication may be considered if stimulant therapy is not fully effective alone or is limited by side effects. Guanfacine ER and clonidine ER have current FDA approval for adjunctive therapy with stimulant medications. Atomoxetine has also been shown to be useful as an adjunct to stimulant therapy on an off-label basis.^{8,11}

The recommended non-stimulant ADHD medications include alpha-2 adrenergic agonists and selective norepinephrine reuptake inhibitors (NRIs). Guanfacine ER, clonidine ER, atomoxetine, and viloxazine have all been approved by the FDA for the treatment of ADHD in children and adolescents 6 years of age or older. Other non-stimulant medications used for ADHD off-label include short-acting guanfacine and clonidine, bupropion, tricyclic antidepressants (amitriptyline, nortriptyline, desipramine, or imipramine), modafinil, and armodafinil.^{8,11} Selected non-stimulant medications for ADHD available in the CDL are listed in **Table 4**.

Table 4. Selected Non-Stimulant Therapies for ADHD on the CDL*

Drug Class	Drug Names/Formulations	Notes
Alpha-2 Adrenergic Agonists	<ul style="list-style-type: none"> • Clonidine: <ul style="list-style-type: none"> – IR tablets – ER 12-hour tablets – Transdermal patch (24-hour) • Guanfacine: <ul style="list-style-type: none"> – IR tablets – ER tablets 	<ul style="list-style-type: none"> • Clonidine ER and guanfacine ER are FDA-approved as adjunct therapy to stimulants. • Guanfacine ER tablets should not be administered with a high-fat meal due to increased drug exposure. • Monitor BP, HR, fatigue, and sedation. • Clonidine is more sedating than guanfacine. • Clonidine and guanfacine should be tapered off to avoid rebound hypertension. • IR clonidine and guanfacine are typically dosed 3-4 times daily. • Full treatment effect may take up to 4 weeks.
Selective NRIs	<ul style="list-style-type: none"> • Atomoxetine: <ul style="list-style-type: none"> – Capsules 	<ul style="list-style-type: none"> • Capsules cannot be opened. • Liver injury can rarely occur. Monitor for jaundice or dark urine. • Full treatment effect may take approximately 6 weeks.

* For current information on covered products, refer to the [Contract Drugs & Covered Products Lists](#) page on the [Medi-Cal Rx Web Portal](#).

The most common side effects of clonidine and guanfacine are somnolence and sedation, which may improve over time. Periodic monitoring of BP and HR is recommended for patients on clonidine and guanfacine, as both drugs can lower BP and HR. In contrast to clonidine, guanfacine acts as a selective alpha-2A-adrenergic receptor agonist and is less sedating. Because rebound hypertension after abrupt guanfacine and clonidine discontinuation has been observed, these medications should be tapered off rather than suddenly discontinued.^{8,11}

Adverse effects of atomoxetine include decreased appetite, initial somnolence, and gastrointestinal tract symptoms, particularly if the dosage is increased too rapidly. Extremely rarely, hepatitis has been associated with atomoxetine. Atomoxetine has also been linked to

growth delays compared to expected trajectories in the first one to two years of treatment, with a return to expected measurements after two to three years of treatment. Growth delays were most often observed among those who were taller or heavier than average before treatment.^{8,11}

Monitoring

Monitoring of treatment for ADHD ideally includes a range of clinicians on the care team, including primary care clinicians, nurses, and other support staff. After initiation of ADHD medications, available evidence suggests that improved outcomes are associated with a monitoring contact within 30 days, made in person, by telephone, or via electronic communication. For patients who are prescribed ADHD medication, monitoring should also include attention to side effects such as HR, BP, height, and weight. More frequent monitoring will often be required during medication titration or after a medication change.

Monitoring should also include collecting standardized information using rating scales at least twice yearly to assess ADHD symptoms, functional impairment, and any unmet needs with current treatment. Screening and assessment for emerging coexisting conditions, including mental health, neurodevelopmental, learning, and physical health conditions, should be conducted at least annually and whenever a caregiver or teacher notes concerns.

When possible, clinicians should contact school personnel to ensure coordination between the prescriber's interventions and those implemented by school personnel. Notably, regular teacher ratings can be instrumental in titrating medication dosage by helping the provider to determine when the lowest effective dose has been achieved.

Parent and Patient Education

As ADHD is a chronic illness, education for both the patient and family members is a critical element in the care plan. Family education involves all family members and should include age-appropriate information for the affected child or adolescent and any siblings. Topics to review may include typical symptoms of ADHD and common coexisting disorders, the assessment process, ADHD's effect on school performance and social interactions, and the different treatment options available. In addition, parental education should emphasize ways to advocate for their child and resources for obtaining accurate information about ADHD and treatments. Parents can find comprehensive information on the [Parenting a Child with ADHD](#) page on the [CHADD National Resource Center for ADHD](#) website and read more about treatment options in the [Attention-Deficit/Hyperactivity Disorder \(ADHD\): Parents' Medication Guide](#), created by the American Academy of Child and Adolescent Psychiatry.

Treatment of ADHD in the Medi-Cal Population Younger than 18 Years of Age

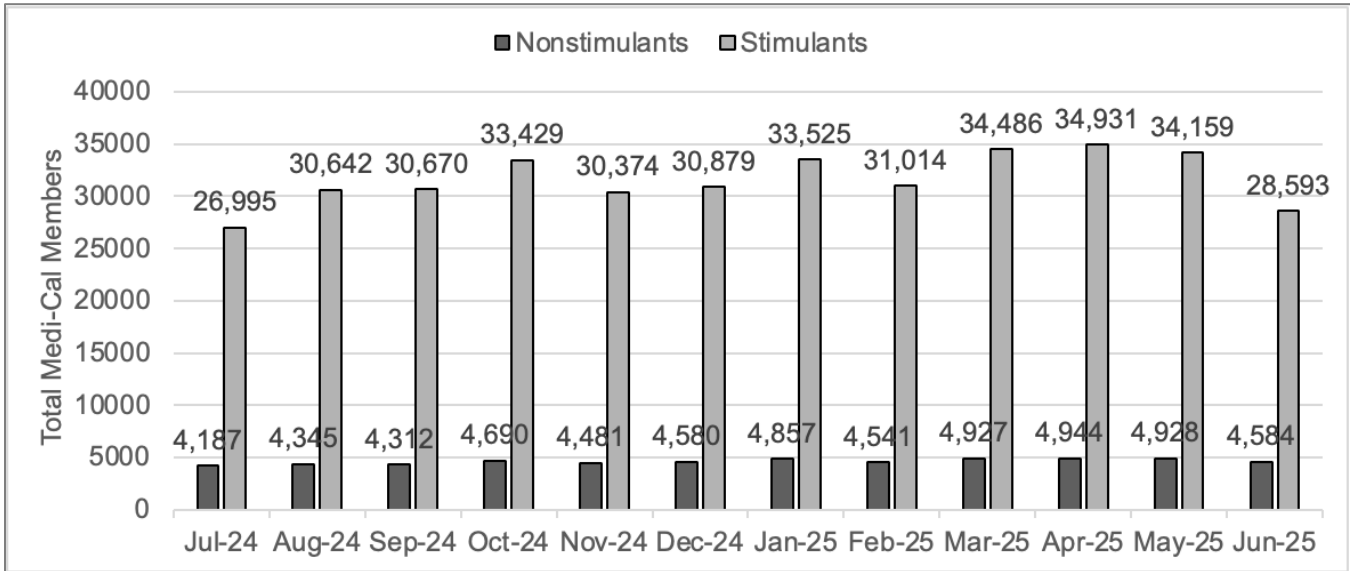
A retrospective administrative claims analysis was conducted to evaluate the recent use of recommended first-line therapies for the treatment of ADHD among Medi-Cal members, including stimulant and non-stimulant medications. All paid medical and pharmacy claims were

reviewed for eligible Medi-Cal members with a date of service (DOS) between July 1, 2024, and June 30, 2025. A 90-day lookback period was included to account for any days' supply that overlapped with the measurement year, covering pharmacy claims paid before July 1, 2024. Eligible Medi-Cal members included all children and adolescents younger than 18 years of age who were not dually eligible for Medicare.

Results

During the measurement year, a total of 88,903 Medi-Cal members younger than 18 years of age received at least one paid claim for a first-line medication for the treatment of ADHD (both stimulants and nonstimulants). As shown in **Figure 1**, the use of recommended first-line medications for treating ADHD was relatively consistent throughout the measurement year, with decreases seen during summer months when children and adolescents are not in school.

Figure 1. Total Medi-Cal Members Younger than 18 Years of Age with Paid Claims for ADHD Medications.



Only 3% (n = 2,667) of members younger than 6 years of age had a paid claim for an ADHD medication during the measurement year, with the majority (60%) of claims being for methylphenidate.

In addition, results from the [Medicaid and Children’s Health Insurance Program \(CHIP\) Core Set Data Dashboard](#) were reviewed for the Follow-Up Care for Children Prescribed ADHD Medication (ADD-CH) measure in the Medi-Cal population. This measure reports the percentage of children ages 6 to 12 who were newly prescribed ADHD medication and had at least three follow-up care visits within 10 months, at least one of which occurred within 30 days of the first ADHD medication dispensing. **Figure 2** shows the percentage of children over time who had one follow-up visit with a practitioner with prescribing authority during the 30-day Initiation Phase. **Figure 3** shows the percentage of children over time who remained on the medication for at least 210 days after the Initiation Phase ended and who had at least two

additional follow-up visits within 270 days (9 months) during the Continuation and Maintenance phase.

Figure 2. Follow-Up Care for Children Prescribed ADHD Medication (ADD-CH) – Initiation Phase in the Medi-Cal Population, 2017 – 2024.

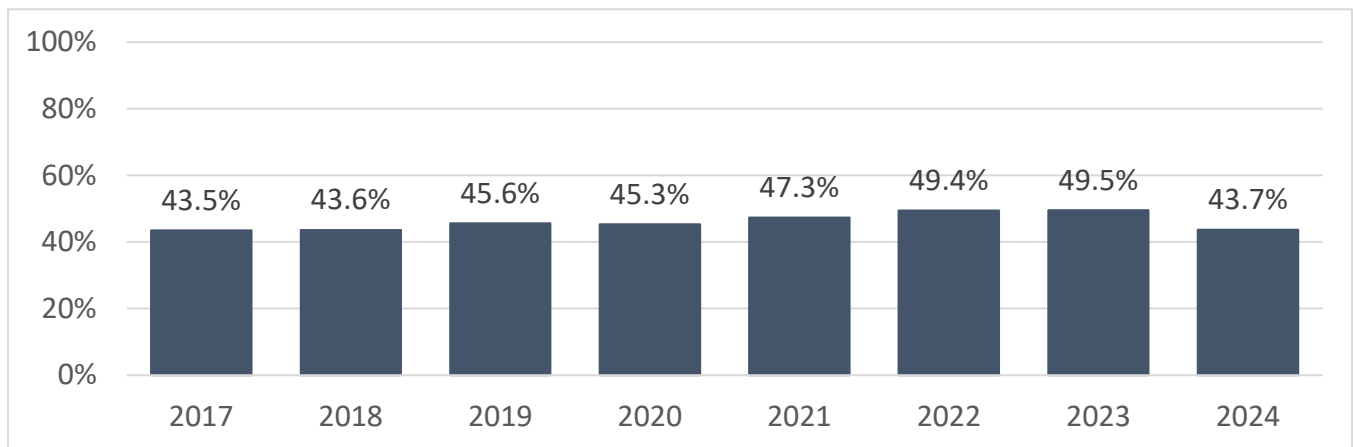
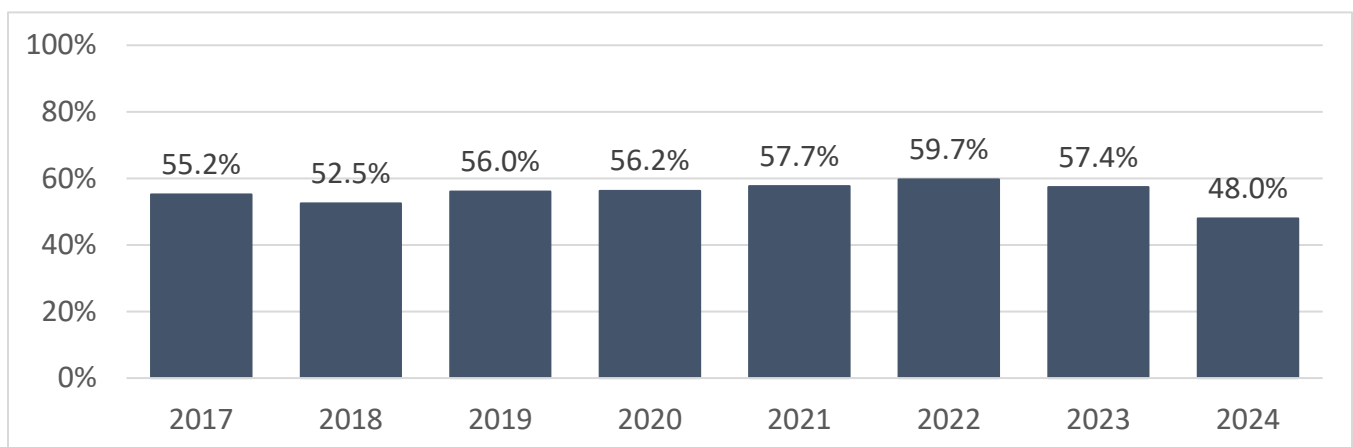


Figure 3. Follow-Up Care for Children Prescribed ADHD Medication (ADD-CH) – Continuation and Maintenance Phase in the Medi-Cal Population, 2017 – 2024.



Conclusion/Discussion

Current treatment guidelines for pediatric ADHD encourage a tailored approach, often including a combination of evidence-based behavioral interventions and pharmacotherapy, based on the patient’s age group. If pharmacotherapy is indicated, stimulants are recommended as first-line medications due to their high efficacy rates and long-term safety data. Non-stimulants can be considered for individuals who have contraindications to stimulants, do not tolerate stimulant therapy, have an incomplete treatment response to stimulants, or who prefer to avoid stimulants. After initiation of medication for ADHD, a follow-up visit should occur within 30 days after starting treatment, followed by at least two additional visits in the subsequent 9 months while remaining on pharmacotherapy. Lastly, a team-based approach is encouraged to effectively monitor treatment progress, including the child, family members, school personnel, and clinicians.^{8,9}

Clinical Recommendations

- The child's age group should guide the general treatment approach for ADHD management in children and adolescents.
- For preschool-aged children, first-line therapy should include behavior management with evidence-based parent training and school support programs when possible. Methylphenidate therapy can be considered if behavioral interventions have not improved or if parent behavior management training is unavailable.
- For school-aged children and adolescents, clinicians should prescribe an FDA-approved medication for ADHD, with encouragement to include behavioral interventions with pharmacotherapy.
- Clinicians should screen for comorbid conditions before prescribing medication for ADHD.
- Stimulant medications are considered first-line treatment for school-aged children and adolescents due to higher efficacy than non-stimulant medications.
- Non-stimulant medications may be useful if stimulant medications are not tolerated or to augment stimulant medications for any residual symptoms not controlled by stimulant therapy alone.
- Selection of ADHD medications should consider the patient's unique preferences, such as methods of administration, symptom profile, and tolerability.
- Clinicians should screen patients with ADHD for SUD using the 2-question National Institute on Alcohol Abuse and Alcoholism (NIAAA) Youth Alcohol Screening Tool, and use a Screening to Brief Intervention (SBIRT) approach for those 12 years of age or older.
- Adolescents who are prescribed stimulants should be counseled on the potential for diversion and misuse.
- For complex ADHD (children younger than 4 years or older than 12 years who have co-occurring conditions, moderate to severe impairment, or an inadequate response to standard treatment), interprofessional assessment and individualized pharmacologic planning are recommended as described in the [guideline for complex ADHD](#).

References

1. Rajaprakash M, Leppert ML. Attention-Deficit/Hyperactivity Disorder. *Pediatr Rev*. 2022;43(3):135-147. Available at: <https://doi.org/10.1542/pir.2020-000612>. Accessed April 10, 2026.
2. Barbaresi WJ, Katusic SK, Colligan RC, Weaver AL, Jacobsen SJ. Long-term school outcomes for children with attention-deficit/hyperactivity disorder: a population-based perspective. *J Dev Behav Pediatr*. 2007;28(4):265-273. Available at: <https://doi.org/10.1097/DBP.0b013e31811ff87d>. Accessed April 10, 2026.
3. Barbaresi WJ, Colligan RC, Weaver AL, Voigt RG, Killian JM, Katusic SK. Mortality, ADHD, and psychosocial adversity in adults with childhood ADHD: a prospective study. *Pediatrics*. 2013;131(4):637-644. Available at: <https://doi.org/10.1542/peds.2012-2354>. Accessed April 10, 2026.

4. Child and Adolescent Health Measurement Initiative. 2023–2024 National Survey of Children’s Health (NSCH) data query. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Available at: <http://www.childhealthdata.org>. Accessed: April 10, 2026.
5. Chronis-Tuscano A, Bounoua N. ADHD Prevalence Rose, Yet Disparities Remain: Commentary on the 2022 National Survey of Children's Health. *J Clin Child Adolesc Psychol*. 2024;53(3):361–372. Available at: <https://doi.org/10.1080/15374416.2024.2359075>. Accessed April 10, 2026.
6. Martin J. Why are females less likely to be diagnosed with ADHD in childhood than males?. *Lancet Psychiatry*. 2024;11(4):303–310. Available at: [https://doi.org/10.1016/S2215-0366\(24\)00010-5](https://doi.org/10.1016/S2215-0366(24)00010-5). Accessed April 10, 2026.
7. Hinshaw SP, Nguyen PT, O'Grady SM, Rosenthal EA. Annual Research Review: Attention-deficit/hyperactivity disorder in girls and women: underrepresentation, longitudinal processes, and key directions. *J Child Psychol Psychiatry*. 2022;63(4):484–496. Available at: <https://doi.org/10.1111/jcpp.13480>. Accessed April 10, 2026.
8. Wolraich ML, Hagan JF Jr, Allan C, et al. Clinical Practice Guideline for the Diagnosis, Evaluation, and Treatment of Attention-Deficit/Hyperactivity Disorder in Children and Adolescents. *Pediatrics*. 2019;144(4):e20192528. Available at: <https://doi.org/10.1542/peds.2019-2528>. Accessed April 10, 2026.
9. Barbaresi WJ, Campbell L, Diekroger EA, et al. Society for Developmental and Behavioral Pediatrics Clinical Practice Guideline for the Assessment and Treatment of Children and Adolescents with Complex Attention-Deficit/Hyperactivity Disorder. *J Dev Behav Pediatr*. 2020;41 Suppl 2S:S35–S57. Available at: <https://doi.org/10.1097/DBP.0000000000000770>. Accessed April 10, 2026.
10. Boland H, DiSalvo M, Fried R, et al. A literature review and meta-analysis on the effects of ADHD medications on functional outcomes. *J Psychiatr Res*. 2020;123:21–30. Available at: <https://doi.org/10.1016/j.jpsychires.2020.01.006>. Accessed April 10, 2026.
11. O'Connor L, Carbone S, Gobbo A, Gamble H, Faraone SV. Pediatric attention deficit hyperactivity disorder (ADHD): 2022 updates on pharmacological management. *Expert Rev Clin Pharmacol*. 2023;16(9):799–812. Available at: <https://doi.org/10.1080/17512433.2023.2249414>. Accessed April 10, 2026.
12. Zhang L, Zhu N, Sjölander A, et al. ADHD drug treatment and risk of suicidal behaviours, substance misuse, accidental injuries, transport accidents, and criminality: emulation of target trials. *BMJ*. 2025;390:e083658. Available at: <https://doi.org/10.1136/bmj-2024-083658>. Accessed April 10, 2026.
13. Newcorn, J. H. ADHD, substance use disorders and stimulant treatment: understanding the relationships. *World Psychiatry*. 2025;24(3), 377–378. Available at: <https://doi.org/10.1002/wps.21348>. Accessed April 10, 2026.