HERC COVERAGE GUIDANCE

Children under Age 6

For children under 6 diagnosed with disruptive behavior disorders\(^1\), including those at risk for ADHD, specific parent behavior training\(^2\) is recommended for coverage as first-line therapy (strong recommendation).

Pharmacotherapy\(^2\) is recommended for coverage as a second line therapy (weak recommendation).

Provider consultation with teachers is recommended for coverage (weak recommendation).

Children Age 6 and Over

For children 6 and over who are diagnosed with ADHD\(^1\), pharmacotherapy\(^3\) alone (weak recommendation) or pharmacotherapy\(^3\) with psychosocial/behavioral treatment (strong recommendation) are recommended for coverage.

Provider consultation with teachers is recommended for coverage (weak recommendation).

\(^1\)Children with comorbid mental health conditions may require additional or different treatments that are not addressed in this guidance.

\(^2\)Effective studied types of parent behavior training include: Triple P (Positive Parenting of Preschoolers) Program, Incredible Years Parenting Program, Parent-Child Interaction Therapy and New Forest Parenting Program. The term “parent” refers to the child’s primary care givers, regardless of biologic or adoptive relationship.

\(^3\)Limited to medications that are FDA-approved for the condition.

Note: Definitions for strength of recommendation are provided in Appendix A GRADE Element Description
RATIONALE FOR GUIDANCE DEVELOPMENT

The HERC selects topics for guideline development or technology assessment based on the following principles:

- Represents a significant burden of disease
- Represents important uncertainty with regard to efficacy or harms
- Represents important variation or controversy in clinical care
- Represents high costs, significant economic impact
- Topic is of high public interest

Coverage guidance development follows to translate the evidence review to a policy decision. Coverage guidance may be based on an evidence-based guideline developed by the Evidence-based Guideline Subcommittee or a health technology assessment developed by the Heath Technology Assessment Subcommittee. In addition, coverage guidance may utilize an existing evidence report produced by one of HERC’s trusted sources, generally within the last three years.

EVIDENCE SOURCE


The summary of evidence in this document is derived directly from these evidence sources, and portions are extracted verbatim.

SUMMARY OF EVIDENCE

Clinical Background

Attention deficit hyperactivity disorder (ADHD) is a condition characterized by inattention, overactivity, and impulsivity. While ADHD can begin before children enter
school, it is most commonly identified and treated in primary school. Boys are classified with ADHD approximately twice as frequently as girls, and primary school–age children approximately twice as frequently as adolescents. ADHD symptoms exist on a continuum in the general population and are considered a “disorder” to a greater or lesser degree. Symptoms are clinically significant when they cause impaired functioning. The DSM-IV criteria include subtypes: (1) predominantly inattentive, (2) predominantly hyperactive-impulsive, and (3) combined inattentive and hyperactive.

Although the condition now classified as ADHD was first described clinically in 1902, few treatments were available until the 1950s, when methylphenidate (brand name, Ritalin) was developed to target the condition. The use of pharmacotherapy has increased through the years, along with refinements in understanding and recognition of the condition as a disorder. The diagnosis of ADHD and prescriptions for its treatment have grown exponentially, particularly in North America. By the end of the 1960s, approximately 150,000 to 200,000 children were treated with stimulants, which represented 0.002% of the U.S. child population at that time. In contrast, the U.S. National Survey of Child Health provides a 2003 estimate of 4.4 million children who were identified at some point as having ADHD, which represents 7.8% of that population, of which 2.5 million (56%) were receiving medication. Within the United States, the estimated prevalence of adult ADHD stands at 4.4%. Prescriptions for the treatment of ADHD have increased as well, with methylphenidate prescriptions increasing from 4 million to 11 million, and prescriptions for amphetamines increasing from 1.3 million to 6 million in an eight year period of time (1991-1999).

Drugs currently FDA approved for treatment of ADHD and their maximum recommended daily dosages are listed in Table 1. In addition, a variety of antidepressants are used off-label to treat this condition.

**Table 1. FDA Approved Medications for the Treatment of ADHD**

<table>
<thead>
<tr>
<th>Drug Class/Generic name</th>
<th>Brand names</th>
<th>FDA Approved max dose/day</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Amphetamine preparations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mixed amphetamine salts</td>
<td>Adderall</td>
<td>40mg</td>
</tr>
<tr>
<td></td>
<td>Adderall XR</td>
<td>30mg</td>
</tr>
<tr>
<td>Dextroamphetamine</td>
<td>Dexedrine, Dextrostat</td>
<td>40mg</td>
</tr>
<tr>
<td></td>
<td>Dexedrine spanule</td>
<td>40 mg</td>
</tr>
<tr>
<td>Lisdexamfetamine</td>
<td>Vyvanse</td>
<td>70 mg</td>
</tr>
<tr>
<td><strong>Methylphenidate preparations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dexamethylphenidate</td>
<td>Focalin</td>
<td>20mg</td>
</tr>
<tr>
<td>Drug Class/ Generic name</td>
<td>Brand names</td>
<td>FDA Approved max dose/day</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Focalin XR</td>
<td></td>
<td>30mg</td>
</tr>
<tr>
<td>Methylphenidate HCL</td>
<td>Methylin, Ritalin, Ritalin LA, Ritalin SR, Metadate CD, Metadate ER</td>
<td>60mg</td>
</tr>
<tr>
<td>Daytrana</td>
<td></td>
<td>30mg</td>
</tr>
<tr>
<td>Concerta</td>
<td></td>
<td>54mg &lt; 13 years/ 72mg ≥ 13 years¹</td>
</tr>
<tr>
<td><strong>SNRIs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atomoxetine</td>
<td>Strattera</td>
<td>1.4mg/kg or 100mg</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guanfacine extended release</td>
<td>Intuniv</td>
<td>4mg</td>
</tr>
<tr>
<td>Clonidine extended release</td>
<td>Kapvay</td>
<td>0.4mg/day</td>
</tr>
</tbody>
</table>

**Evidence Review**

The purpose of this review is to critically examine the effectiveness and adverse events of interventions in preschool children with clinically significant disruptive behavior and therefore at high risk for ADHD and to similarly examine the comparative long-term effectiveness and adverse events of interventions for ADHD.

**Treatment of Preschoolers with Disruptive Behavior Disorders**

For the management of preschoolers with disruptive behavior disorders, including children considered to be at risk for ADHD², evidence was grouped into two broad categories of treatment: behavioral interventions and psychostimulant medication. A total of 31 studies evaluated parent behavior training, which was primarily defined as one of four manualized programs³. Nearly all studies showed positive effects, and pooled results for eight good-quality studies also found a significant improvement in

¹ From AAP 2011 reference
² The ADHD diagnosis has not been widely applied in children under age 6 because of uncertainty regarding the reliability and validity of the diagnostic criteria in this age group. Because ADHD in this age group is commonly identified in the context of other disruptive behaviors, and in children with diagnoses of Disruptive Behavior Disorders including Oppositional Defiant Disorder and Conduct Disorder, the evidence review includes studies of children less than six with Disruptive Behavior Disorders.
³ Triple P (Positive Parenting of Preschoolers) Program, Incredible Years Parenting Program, Parent-Child Interaction Therapy and New Forest Parenting Program

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HERC Approved 12/5/2013
child behavior with parent behavior training. In addition, the single good-quality study of methylphenidate finds that it appears to be effective. The strength of evidence for use of parent behavior training was judged high due to number of studies and consistency of results. The strength of evidence for methylphenidate was judged low because there is only one good-quality study.

Long-term extension (follow-up) studies for the RCTs of parent behavior training suggest that the benefits are maintained for several years, although no long-term study (lasting 12 months or more) of parent behavior training alone included untreated comparison groups, and attrition was high. A recent study examining parent behavior training with and without school-based teacher or child interventions included a no-treatment control. This study showed maintenance of benefits of parent behavior training at two years. Studies do not comment on adverse events related to parent behavior training.

Five studies examining combinations of parent behavior training and school or daycare interventions for preschool children at risk for disruptive behavior disorder and/or ADHD suggest that adding classroom teacher consultation may be important for children in low socioeconomic status (SES) communities, but not for families with educated parents who live in communities with resources, although direct comparisons of identical interventions offered to families of different SES have not yet been performed. All behavioral interventions showed benefits relative to no-treatment controls, and a dose response to the number of parent behavior training sessions attended by parents was also identified, enhancing the overall strength of evidence for effectiveness of parent behavior training.

Several small, short-term trials of psychostimulant medication use in preschoolers, primarily immediate release methylphenidate, suggest that it is efficacious and safe. In addition, the Preschool ADHD Treatment Study (PATS), a large, high quality trial funded by the National Institute of Mental Health also suggests that methylphenidate is effective for improving parent-rated child behavior in preschoolers. This multisite trial had multiple phases, beginning with 10 sessions of parent behavior training. The training was followed by an open label safety lead-in phase of a psychostimulant medication, then a titration phase, a cross-over phase and open-label maintenance phase that lasted 10 months. The PATS study offers information about both the potential benefits and limitations of stimulant medication use in very young children. Limitations include the following: preschool children experience more dose-related adverse events than older children, stimulants interfere with rates of growth, and the presence of three or more comorbid conditions and psychosocial adversity are associated with lessened effectiveness of psychostimulant medication. These findings are supported by two additional “fair” quality RCTs.
In conclusion, both parent behavior training and psychostimulant medication are effective treatment for preschoolers with disruptive behavior disorders. There are no adverse events reported for parent behavior training, while there are adverse effects with methylphenidate. This favors the use of parent behavior training for preschoolers at risk for ADHD due to disruptive behavior. A direct comparison has not yet been done.

**Long-Term Effectiveness and Safety of Interventions in People Age 6 and Older**

*Pharmacologic Agents*

The long-term effectiveness and safety (at least 12 months of treatment and/or follow up) of several psychostimulants (e.g., methylphenidate immediate release amphetamine, Osmotic-controlled Release Oral delivery System methylphenidate, dextroamphetamine, mixed amphetamine salts, atomoxetine, clonidine and guanfacine extended release) have all been examined prospectively in children and adolescents age 6 and over. The agents examined were all shown to be efficacious for control of inattention, overactivity, and impulsiveness for at least 12 months and up to three years, and few serious adverse events were noted, although guanfacine extended release appears to be less well tolerated than other agents examined. Global ratings of impairment also indicate continued benefit throughout the extension studies for patients still receiving medications. In general, those who remain on medication show continued benefit, and few adverse events are reported for them. With a majority of the studies funded by industry (12 of 21), there may be enhanced representations of effectiveness and safety. Psychostimulants continue to provide control of ADHD symptoms and are well tolerated for months to years at a time.

Fewer children experienced adverse events with methylphenidate than with dextroamphetamine. Concerns about adverse events led to discontinuation of medications for 15% to 20% of children age 6 and over using extended release mixed amphetamine salts. Concerns about exacerbation of tics with stimulants appear to be unfounded, although the sample size remains small. Use of psychostimulants slows the rate of growth, and increases blood pressure and heart rate to a small degree. At a group level, the mean changes are clinically insignificant, although on rare occasions individuals discontinue an agent because of changes in vital signs. There are many similarities between methylphenidate immediate release and other preparations of psychostimulants, both in terms of efficacy and in the side effect profile. Therefore, many researchers and clinicians assume all psychostimulants are effective and safe for extended periods of time. The documentation for this assertion is not yet robust.

Atomoxetine is both safe and effective for ADHD symptoms over 12 to 18 months among children and for up to three years in adults. Discontinuation in children and teens appears to be higher (26%) due to ineffectiveness and lower (3%) due to adverse events than with other agents, although these are not direct comparisons. As with
psychostimulants, the group means for blood pressure and heart rate show small but clinically insignificant increases. There is only one study of a pharmacologic intervention over an extended time period (three years) in adults with ADHD, and that study found symptom improvement was maintained for those on atomoxetine, and discontinuation due to adverse events was somewhat higher for adults (11%) than for children (3%).

An extension study of guanfacine suggests that this agent is also effective in controlling ADHD symptoms for up to two years; however, high rates (40% to 60%) of somnolence, headache, and fatigue occur when it is used as a monotherapy, especially in the initial six to eight months of treatment. A second study examined concurrent use of psychostimulants and noted improved tolerance to these adverse effects. Changes in vital signs occur, but no clear group trends are noted. Individuals may develop clinically significant hypotension and bradycardia. Serious adverse events include syncope and clinically significant changes on electrocardiogram.

Overall, pharmacologic agents used for controlling the symptoms of inattention, overactivity, and impulsivity of ADHD show maintenance of effectiveness and safety for 12 to 24 months. Following that, attrition from use interferes with the ability to draw conclusions. Along with decreased symptoms, overall functioning is improved.

**Psychosocial and Behavioral Interventions, Alone and in Combination with Medication**
Investigations comparing psychosocial/behavioral interventions, alone and in combination with psychostimulant medication management, showed that both medication and combined medication/behavioral treatment (including school-based interventions) are more effective in treating ADHD and oppositional defiant disorder symptoms than psychosocial or behavioral interventions alone. Psychosocial interventions in the four included trials included intensive behavioral treatment (parent behavior training, child-focused treatment and a school-based intervention), multimodal treatment (parent behavior training, behavior management training, family therapy and child social skills training), “behavior treatment” (undefined) and EEG biofeedback.

**Longer Term Outcomes**
Evaluation of long-term outcomes (five or more years follow up) following interventions for ADHD is complex due to multiple patterns of services used and very few studies available, with only two RCTs of well-characterized clinical samples, both of boys ages 7 to 9 years with DSM-IV ADHD, combined subtype. The best quality data come from the Multimodal Treatment of ADHD Study, which compared 14 months of management with immediate release methylphenidate to three other interventions: psychosocial and behavioral treatment; the combination of medication management and psychosocial and behavioral treatment; and standard community care. Three years after initiation, the four intervention groups showed comparable outcomes. No clear relationship was identified between duration of medication use and psychiatric or overall functional outcomes at...
three years or beyond. In contrast, a few long-term cohort studies lasting five years or more suggest that increased duration of medication was associated with improved grade retention and academic achievement. No prospective studies have been designed to investigate the question of long-term functional outcomes directly. There appear to be long-term academic benefits with medication interventions in some domains.

In conclusion, the evidence for long-term effectiveness of pharmacologic agents for improving ADHD symptoms is based on a single good study for methylphenidate and a single good study for atomoxetine. These studies followed the children for 12 or 14 months and showed benefit with few adverse effects, thereby resulting in low strength of evidence for longer term effectiveness for each of these agents. Similarly, there is a single good study showing benefits for the combination of methylphenidate and psychosocial interventions. The evidence for other pharmaceutical agents is insufficient, as is the evidence pertaining to parent behavior training and academic interventions.

[Evidence Source]

Evidence Summary

For children under age six, both parent behavior training and psychostimulant medication are effective treatment for preschoolers with disruptive behavior disorders. Classroom teacher consultations in addition to parent behavior training are beneficial to children of lower socioeconomic status. There are no adverse events reported for parent behavior training, while there are adverse effects with methylphenidate.

In children age six and over, there is evidence to support the long-term effectiveness of both methylphenidate and atomoxetine for improving ADHD symptoms, as well as methylphenidate combined with behavioral/psychosocial interventions. There is evidence for only the short-term effectiveness for other FDA approved medications and guanfacine, the latter of which has more frequent adverse events.
GRADE-INFORMED FRAMEWORK

The HERC develops recommendations by using the concepts of the Grading of Recommendations Assessment, Development and Evaluation (GRADE) system. GRADE is a transparent and structured process for developing and presenting evidence and for carrying out the steps involved in developing recommendations. There are four elements that determine the strength of a recommendation, as listed in the table below. The HERC reviews the evidence and makes an assessment of each element, which in turn is used to develop the recommendations presented in the coverage guidance box. Balance between desirable and undesirable effects, and quality of evidence, are derived from the evidence presented in this document, while estimated relative costs, values and preferences are assessments of the HERC members.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Balance between desirable and undesirable effects</th>
<th>Quality of evidence</th>
<th>Resource Allocation</th>
<th>Values and preferences</th>
<th>Coverage Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharmacologic treatment age &lt;6</td>
<td>net benefit, despite some harms</td>
<td>low</td>
<td>modest costs</td>
<td>likely moderate variability in parent preferences for treatment</td>
<td>Pharmacotherapy is recommended for coverage as a second line therapy (weak recommendation)</td>
</tr>
<tr>
<td>Parent Behavior Training (PBT) age &lt;6</td>
<td>net benefit without apparent harms</td>
<td>high</td>
<td>modest costs</td>
<td>likely moderate variability in parent preferences for treatment</td>
<td>Specific parent behavior training is recommended for coverage as first-line therapy (strong recommendation)</td>
</tr>
<tr>
<td>Behavioral/psychosocial treatment age &lt;6</td>
<td>no evidence</td>
<td>insufficient</td>
<td>modest costs</td>
<td>likely moderate variability in parent preferences for treatment</td>
<td>No recommendation</td>
</tr>
<tr>
<td>Pharmacologic treatment alone and combined with behavioral/psychosocial interventions age ≥6</td>
<td>net benefit, despite some harms</td>
<td>low</td>
<td>modest costs</td>
<td>likely moderate variability in parent preferences for treatment</td>
<td>Pharmacotherapy alone (weak recommendation) or pharmacotherapy with psychosocial/behavioral treatment (strong recommendation) are considered first-line therapy and are recommended for coverage</td>
</tr>
<tr>
<td>Indication</td>
<td>Balance between desirable and undesirable effects</td>
<td>Quality of evidence</td>
<td>Resource Allocation</td>
<td>Values and preferences</td>
<td>Coverage Recommendation</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
<td>------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Behavioral/psychosocial treatment alone, PBT, academic interventions age ≥ 6</td>
<td>unable to draw conclusions</td>
<td>insufficient</td>
<td>modest costs</td>
<td>likely moderate variability in parent preferences for treatment</td>
<td>No recommendation</td>
</tr>
<tr>
<td>School/daycare based interventions</td>
<td>net benefit in those &lt;6 of low SES, benefit in ≥ 6 as element of intensive behavioral treatment, no apparent harms</td>
<td>low</td>
<td>modest costs</td>
<td>likely minimal variability in parent preferences</td>
<td>School/daycare based interventions are outside the purview of this coverage guidance (No recommendation) Provider consultation with teachers is recommended for coverage (based on evidence of children &lt;6 with low SES) (weak recommendation)</td>
</tr>
</tbody>
</table>

*The Quality of Evidence rating was assigned by the primary evidence source, not the HERC Subcommittee

Note: GRADE framework elements are described in Appendix A
POLICY LANDSCAPE

Five quality measures were identified when searching the National Quality Measures Clearinghouse. The Institute for Clinical Systems Improvement developed three measures around diagnosis and management of attention deficit hyperactivity disorder (ADHD) in primary care for school age children and adolescents: 1) Percentage of patients diagnosed with ADHD whose medical record contains documentation that the clinician discussed the need for school-based supports and educational service options for children with ADHD; 2) Percentage of patients treated with psychostimulant medication for the diagnosis of ADHD whose medical record contains documentation of a follow-up visit at least twice a year; and 3) Percentage of patients newly diagnosed with ADHD whose medical record contains documentation of DSM-IV-TR or DSM-PC criteria. These three measures have not been endorsed by the National Quality Forum (NQF).

The National Committee for Quality Assurance developed two HEDIS measures, which are both endorsed by the NQF: 1) Follow-up care for children prescribed ADHD medication (initiation phase): percentage of members 6 to 12 years of age with an ambulatory prescription dispensed for ADHD medication, who had one follow-up visit with a practitioner with prescribing authority during the 30-day initiation phase; and 2) Follow-up care for children prescribed ADHD medication (continuation and maintenance [C&M] phase): percentage of members 6 to 12 years of age with an ambulatory prescription dispensed for ADHD medication, who remained on the medication for at least 210 days and who, in addition to the visit in the initiation phase, had at least two follow-up visits with a practitioner within 270 days (9 months) after the initiation phase ended.

Oregon’s Coordinated Care Organizations’ quality of care objectives include the following measure: Meet or exceed the 90th percentile national Medicaid benchmarks for follow up care for children on ADHD medication.

COMMITTEE DELIBERATIONS – EVIDENCE-BASED GUIDELINE SUBCOMMITTEE

The Evidence-based Guidelines Subcommittee had extensive deliberations on the appropriateness and availability of behavioral and psychological treatments. An additional literature search was performed to determine if additional types of psychological interventions had supporting evidence beyond the parent behavioral training, and none were found. The decision was also made to remain silent on the treatment of children over 6 with behavioral/psychological treatments alone, due to implementation considerations and parental preference. Subcommittee members determined the best way to address the coordination with teachers for school-based
interventions was through communication/coordination between the provider and teacher being recommended as a covered service.

COMMITTEE DELIBERATIONS – VALUE-BASED BENEFITS SUBCOMMITTEE

The VbBS approved the draft coverage guidance and updated its guideline note on ADHD at its meeting 8/8/2013.

HERC DELIBERATIONS

The HERC reviewed the draft coverage guidance on 12/5/2013. The Commission discussed the lack of evidence for psychosocial treatments alone for children over age 6 and affirmed the EbGS and HTAS decisions not to recommend for or against it. In addition, the commission discussed a public comment requesting medication as first-line treatment for certain children under the age of six who may be extremely disruptive or violent. After discussion, the Commission decided not to make changes as in those cases another disorder would likely be present and language on comorbidities is already included in the guidance. The Commission approved the draft coverage guidance and the VbBS-recommended guideline note for the Oregon Health plan.
### Appendix A. GRADE Framework Description

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balance between desirable and undesirable</td>
<td>The larger the difference between the desirable and undesirable effects, the higher the likelihood that a strong recommendation is warranted. The narrower the gradient, the higher the likelihood that a weak recommendation is warranted.</td>
</tr>
<tr>
<td>evidence</td>
<td>The higher the quality of evidence, the higher the likelihood that a strong recommendation is warranted</td>
</tr>
<tr>
<td>Costs (resource allocation)</td>
<td>The higher the costs of an intervention—that is, the greater the resources consumed—the lower the likelihood that a strong recommendation is warranted</td>
</tr>
<tr>
<td>Values and preferences</td>
<td>The more values and preferences vary, or the greater the uncertainty in values and preferences, the higher the likelihood that a weak recommendation is warranted</td>
</tr>
</tbody>
</table>

### Strong recommendation

**In Favor:** The subcommittee is confident that the desirable effects of adherence to a recommendation outweigh the undesirable effects, considering the quality of evidence, cost and resource allocation, and values and preferences.

**Against:** The subcommittee is confident that the undesirable effects of adherence to a recommendation outweigh the desirable effects, considering the quality of evidence, cost and resource allocation, and values and preferences.

### Weak recommendation

**In Favor:** the subcommittee concludes that the desirable effects of adherence to a recommendation probably outweigh the undesirable effects, considering the quality of evidence, cost and resource allocation, and values and preferences, but is not confident.

**Against:** the subcommittee concludes that the undesirable effects of adherence to a recommendation probably outweigh the desirable effects, considering the quality of evidence, cost and resource allocation, and values and preferences, but is not confident.

### Quality of evidence across studies for the treatment/outcome

- **High** = Further research is very unlikely to change our confidence in the estimate of effect.
- **Moderate** = Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.
- **Low** = Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.
- **Very low** = Any estimate of effect is very uncertain
## Appendix B. Applicable Codes

<table>
<thead>
<tr>
<th>CODES</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICD-9 Diagnosis Codes</strong></td>
<td></td>
</tr>
<tr>
<td>312.9</td>
<td>Unspecified disturbance of conduct</td>
</tr>
<tr>
<td>314</td>
<td>Hyperkinetic syndrome of childhood</td>
</tr>
<tr>
<td>314.0</td>
<td>Attention deficit disorder of childhood</td>
</tr>
<tr>
<td>314.00</td>
<td>Attention deficit disorder without mention of hyperactivity</td>
</tr>
<tr>
<td>314.01</td>
<td>Attention deficit disorder with hyperactivity</td>
</tr>
<tr>
<td>314.1</td>
<td>Hyperkinesis with developmental delay</td>
</tr>
<tr>
<td>314.2</td>
<td>Hyperkinetic conduct disorder</td>
</tr>
<tr>
<td>314.8</td>
<td>Other specified manifestations of hyperkinetic syndrome</td>
</tr>
<tr>
<td>314.9</td>
<td>Unspecified hyperkinetic syndrome</td>
</tr>
<tr>
<td><strong>ICD-9 Volume 3 (Procedure Codes)</strong></td>
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<tr>
<td>None</td>
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</tr>
<tr>
<td><strong>CPT Codes</strong></td>
<td></td>
</tr>
<tr>
<td>90785</td>
<td>Interactive complexity, add-on code to be used in conjunction with codes for primary service</td>
</tr>
<tr>
<td>90791</td>
<td>Psychiatric diagnostic evaluation (no medical services)</td>
</tr>
<tr>
<td>90792</td>
<td>Psychiatric diagnostic evaluation (with medical services)</td>
</tr>
<tr>
<td>90832</td>
<td>Psychotherapy, 30 minutes with patient and/or family member</td>
</tr>
<tr>
<td>90834</td>
<td>Psychotherapy, 45 minutes with patient and/or family member</td>
</tr>
<tr>
<td>90837</td>
<td>Psychotherapy, 60 minutes with patient and/or family member</td>
</tr>
<tr>
<td>90839</td>
<td>Psychotherapy for crisis, first 60 minutes</td>
</tr>
<tr>
<td>90840</td>
<td>Add-on for each additional 30 minutes of psychotherapy for crisis, used in conjunction with code 90839</td>
</tr>
<tr>
<td>90845</td>
<td>Psychoanalysis</td>
</tr>
<tr>
<td>90846</td>
<td>Family psychotherapy without the patient present</td>
</tr>
<tr>
<td>90847</td>
<td>Family psychotherapy, conjoint psychotherapy with the patient present</td>
</tr>
<tr>
<td>90849</td>
<td>Multiple-family group psychotherapy</td>
</tr>
<tr>
<td>90853</td>
<td>Group psychotherapy (other than of a multiple-family group)</td>
</tr>
<tr>
<td>90863</td>
<td>Pharmacologic management, including prescription and review of medication, when performed with psychotherapy services; used only as add-on to primary psychotherapy code</td>
</tr>
<tr>
<td>98960</td>
<td>Education and training for patient self-management by a qualified, nonphysician health care professional using a standardized curriculum, face-to-face with the patient (could include caregiver/family) each 30 minutes; individual patient</td>
</tr>
<tr>
<td>98961</td>
<td>2-4 patients</td>
</tr>
<tr>
<td>98962</td>
<td>5-8 patients</td>
</tr>
<tr>
<td><strong>HCPCS Codes</strong></td>
<td></td>
</tr>
<tr>
<td>H2027</td>
<td>Psychoeducational service, per 15 minutes</td>
</tr>
<tr>
<td>S9444</td>
<td>Parenting classes, non-physician provider, per session</td>
</tr>
<tr>
<td>S9482</td>
<td>Family stabilization services, per 15 minutes</td>
</tr>
<tr>
<td>T1027</td>
<td>Family training and counseling for child development, per 15 minutes</td>
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</tbody>
</table>

Note: Inclusion on this list does not guarantee coverage
Appendix C. HERC Guidance Development Framework – ADHD Indications
Pharmacologic Treatment age <6 as 1st Line Therapy

HERC Guidance Development Framework

Refer to HERC Guidance Development Framework Principles for additional considerations

Level of Evidence

Sufficient

Effectiveness compared to alt. treatment(s)
(clinically significant improvement in outcomes)

More effective

Less effective

Similar effectiveness

Ineffective or harm exceeds benefit

Effectiveness compared to alt. treatment(s)

More effective

Similar effectiveness

Less effective

Ineffective or harm exceeds benefit

No alt. treatment(s) available/accessible

Alternative effective treatment(s) available/accessible

Decision Point Priorities
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

Final 1/10/2013

Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.

HERC Guidance: Treatment of Attention Deficit Hyperactivity Disorder in Children
HERC Approved 12/5/2013
Pharmacologic Treatment age <6 as 2nd Line Therapy

HERC Guidance Development Framework

Refer to HERC Guidance Development Framework Principles for additional considerations

Decision Point Priorities
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.
Parent Behavior Training (PBT) or School/Daycare Interventions age <6 Compared to Pharmacologic Treatment

**HERC Guidance Development Framework**

Refer to HERC Guidance Development Framework Principles for additional considerations

**Decision Point Priorities**
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

---

**Level of Evidence**
- Sufficient
- Insufficient or Mixed

**Effectiveness compared to alt. treatment(s)**
- More effective
- Similar effectiveness
- Less effective

**Treatment risk compared to alt. treatment(s)**
- More
- Similar or less
- Less

**Cost**
- More
- Similar or less
- Less

**Recommendation**
- Recommend (strong)
- Do not recommend (weak)

---

**No alt. treatment(s) available/accessible**
- Effective
- Ineffective or harm exceeds benefit

**Treatment risk compared to alt. treatment(s)**
- More effective
- Similar effectiveness
- Less effective

**Cost**
- More
- Similar or less
- Less

**Recommendation**
- Recommend (strong)
- Do not recommend (strong)

---

**Alternative effective treatment(s) available/accessible**
- Effective
- Ineffective or harm exceeds benefit

**Treatment risk compared to no treatment**
- Similar or less
- More

**Treatment is prevalent**
- Similar or less
- More

**Cost**
- More
- Similar or less
- Less

**Recommendation**
- Recommend (weak)
- Do not recommend (strong)

---

**Clinical research study is reasonable**
- Yes
- No

---

1. Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.
Pharmacologic Treatment Alone and Combined with Behavioral/Psychosocial Interventions Age ≥ 6

HERC Guidance Development Framework

Refer to HERC Guidance Development Framework Principles for additional considerations

Decision Point Priorities
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

Level of Evidence

Sufficient
Insufficient or Mixed

Effectiveness compared to alt. treatment(s)
(clinically significant improvement in outcomes)

More effective
Similar effectiveness
Less effective
Ineffective or harm exceeds benefit

No alt. treatment(s) available/accessible

Effective
Ineffective or harm exceeds benefit

Alternative effective treatment(s) available/accessible

Treatment risk compared to alt. treatment(s)

More effective
Similar effectiveness
Less effective
Ineffective or harm exceeds benefit

More
Similar or less
Less
More
Similar or more
Less

Cost

Similar or less
Less
More
Similar or more
Less

Recommend
(weak)
Recommend
(strong)
Do not recommend
(strong)
Do not recommend
(weak)

Cost

Treatment risk compared to alt. treatment(s)

Similar or more
Less

Clinical research study is reasonable

Yes
No

Treatment is prevalent

Similar or less
More

Cost

Similar or more
Less

Clinical research study is reasonable

Yes
No

Do not recommend
(strong)
Recommend
(strong)

1 Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.
Behavioral/Psychosocial Treatment Alone, PBT, Academic Interventions Age ≥ 6 Compared to Pharmacologic Treatment

HERC Guidance Development Framework
Refer to HERC Guidance Development Framework Principles for additional considerations

1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

**Level of Evidence**
- Sufficient
- Insufficient or Mixed

**Effectiveness compared to alt. treatment(s)** (clinically significant improvement in outcomes)
- More effective
- Similar effectiveness
- Less effective

**Treatment risk compared to alt. treatment(s)**
- More
- Similar or less
- Less

**No alt. treatment(s) available/accessible**
- Effective
- Ineffective or harm exceeds benefit

**Treatment risk compared to alt. treatment(s)**
- Do not recommend (strong)
- Recommend (strong)

**Cost**
- More
- Similar or less
- Less

**Cost**
- Do not recommend (strong)
- Recommend (strong)

**Clinical research study is reasonable**
- Yes
- No

1. Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.

**Decision Point Priorities**
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

**HERC Guidance Development Framework Principles**
1. Level of evidence
2. Effectiveness & alternative treatments
3. Harms and risk
4. Cost
5. Prevalence of treatment
6. Clinical research study is reasonable

**HERC Guidance Development Framework**

**Level of Evidence**
- Sufficient
- Insufficient or Mixed

**Effectiveness compared to alt. treatment(s)** (clinically significant improvement in outcomes)
- More effective
- Similar effectiveness
- Less effective

**Treatment risk compared to alt. treatment(s)**
- More
- Similar or less
- Less

**No alt. treatment(s) available/accessible**
- Effective
- Ineffective or harm exceeds benefit

**Treatment risk compared to alt. treatment(s)**
- Do not recommend (strong)
- Recommend (strong)

**Cost**
- More
- Similar or less
- Less

**Cost**
- Do not recommend (strong)
- Recommend (strong)

**Clinical research study is reasonable**
- Yes
- No

1. Clinical research study is reasonable when failure to perform the procedure in question is not likely to result in death or serious disability; or in a situation where there is a high risk of death, there is no good clinical evidence to suggest that the procedure will change that risk.