Prior Authorization DRUG Guidelines

CNS Stimulant for Adult Attention Deficit Hyperactivity Disorder (ADHD)

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This policy is a synopsis of the UpToDate article, Adult Attention Deficit Hyperactivity Disorder, by H Russell Searight, PhD, MPH and John M Burke, PhannD. UpToDate performs a continuous review of over 330 journals and other resources. This topic was last changed on January 11, 2005.

INTRODUCTION-Attention deficit hyperactivity disorder (AD/HD) was originally believed to be primarily a pediatric condition. However, the available data suggest that between 30 and 70 percent of children with AD/HD continue to manifest symptoms in adulthood [1-4]. Based upon current childhood prevalence rates, it appears that between 1 and 7 percent of the adult population experiences AD/HD symptoms [1,2]. A preliminary report from the US National Comorbidity Survey Replication found an adult prevalence of 4.4 percent using conservative diagnostic criteria [5].

PATHOGENESIS-The pathophysiologic basis of AD/HD is believed to center on an imbalance in catecholamine metabolism in the cerebral cortex. This hypothesis is primarily based upon animal studies and the response to drugs with noradrenergic activity.

CLINICAL FEATURES AND DIAGNOSTIC CRITERIA - Poor concentration, distractibility, elevated motor activity, and impulsivity should be pervasive features disrupting at least two domains of daily life (eg, school, family, peer relationships). Symptoms should be persistently present since age seven. This longstanding symptom history may be difficult to elicit in adults, but is a key feature of the disorder.

There is a growing consensus that the central feature of AD/HD is disinhibition [18]. This typically manifests as poor self-regulation and difficulty with both focused attention and goal-directed thought and action [19]. Empirical support for inhibitory failure has been found among AD/HD adults [20]. Patients are unable to prevent immediate responding and have deficits in their capacity for monitoring their behavior. Hyperactivity, while a common feature among children, is likely to become less overt in adults. The "on the go" drivenness seen in many AD/HD children is replaced with restlessness, difficulty relaxing, and feeling chronically "on edge." Deficits in sustained attention and concentration are likely to remain and may become more apparent in late adolescence and early adulthood as responsibilities increase. Appointments, social commitments, as well as school and work deadlines, are frequently forgotten. Tasks and appointments may be written on lists, calendars or post-it notes, but these are also forgotten. Completed work is frequently misplaced amid clutter.
EVALUATION-Evaluation of adults for AD/HD can be challenging. Symptoms are subtle and subjective, and there is no single "gold standard" diagnostic test [22].

1. The basic evaluation should include the following:
   • A developmental history, with an attempt to corroborate the information with other sources. Symptoms should be consistently present since early childhood.
   • Assessment of the impact of core ADIHD symptoms on current occupational, school, and relationship functioning.
   • Assessment of attention, concentration, distractibility, and short-term memory.
   • Assessment for the presence of other psychiatric disorders and substance abuse.

Patients who have equivocal results after the above evaluation should be referred for psychological evaluation.

2. Clinical interview-In addition to assessing current ADIHD symptoms and their duration, information about academic grades, conduct in school, and psychiatric history should be obtained to help determine a consistent symptom pattern. Patients should be encouraged to provide past school records and information from their parents.

3. Mental status testing-Mental status testing is helpful for assessing cognitive functioning in the office, although impaired performance may result from numerous psychiatric and medical conditions. Tasks should include serial sevens to assess concentration, digit span forward and backward to assess attention, immediate recall, and concentration. Short-term memory can be assessed by having the patient verbally recall a brief paragraph previously read to them. The ability to attend to relevant stimuli while discounting distracting material can be assessed through vigilance tasks. As an example, the patient is read a list of random letters and is instructed to tap their finger when a target letter occurs. Orally administered math problems are more demanding tasks requiring both concentration and problem solving.

4. Medical evaluation-The medical evaluation should include a neurological examination. There are suggestions that patients with ADIHD exhibit a greater incidence of neurological signs including problems with right-left discrimination, motor overflow movements, and sequencing difficulties [30,31]. Laboratory testing is undertaken to identify medical conditions that may present with symptoms similar to those of ADIHD. Suggested tests include lead levels and thyroid function tests [31,33].

TREATMENT-The mainstay of ADIHD treatment is pharmacotherapy. Counseling and specific psychotherapies may be required to assist the patient in restructuring dysfunctional life patterns while pharmacotherapy improves their ability to focus and organize their lives.

Pharmacotherapy-Based upon the pathophysiologic mechanisms cited above, medications acting through the norepinephrine pathways of the CNS appear to most directly treat ADIHD [39,40]. Agents working through other pathways may augment this response directly or by treating comorbid disorders. Stimulants and antidepressants (particularly those with norepinephrine activity) primarily have been used to treat ADIHD.

• Stimulants-Stimulants are the most commonly used medications in adults with ADIHD. These agents stimulate the release of catecholamines from storage sites at CNS synapses. Because catecholamine receptors are pervasive throughout the CNS, the exact focus of the pharmacologic effect is unclear. Increased norepinephrine and dopamine concentrations in the brain stem, midbrain, and frontal cortex have been postulated to be responsible for the increased attention span and concentration that occurs with the use of stimulants.
• Antidepressants — Antidepressants that inhibit reuptake of norepinephrine have been evaluated for the treatment of AD/HD as a means of increasing the concentration of catecholamines in the CNS [54].

Tricyclic antidepressants (TCAs) inhibit the reuptake of norepinephrine and serotonin. The secondary amine TCAs, such as desipramine and nortriptyline, may be preferred because of greater effects on norepinephrine than on serotonin and a better side effect profile than other TCAs. Because of the possibility of cardiac conduction abnormalities, an electrocardiogram should be obtained before initiating TCA therapy and after the dosage is stabilized.

Bupropion, an atypical antidepressant with more stimulant properties than the TCAs, may be effective in adults with AD/HD.

Antidepressant therapy in adults with AD/HD may be particularly helpful in reducing affective instability and controlling a coexistent mood disturbance. Because of the different effects of stimulants and antidepressants, some patients may benefit from the combination of a stimulant and an antidepressant.

The efficacy of all of the stimulants appears to be similar, although the greatest experience is with methylphenidate.

Pre-Authorization Criteria:

Currently, adult AD/HD is viewed as a chronic, life-long condition continuing from early childhood. Thus, continued pharmacotherapy throughout adulthood is usually indicated. Little is known, however, about the long term effects of stimulant medication, since few longitudinal studies have followed children with AD/HD receiving stimulant therapy into adulthood. It is not known if long term stimulant therapy is associated with a greater incidence of adult substance abuse.

Therefore, VCHCP will authorize stimulants for those members who meet the following criteria:
• The member must first undergo a thorough medical evaluation by his/her primary care provider.
• Then a complete psychological evaluation must be performed by a licensed physician who has expertise in adult attention deficit hyperactivity disorder. This evaluation must include basic evaluation, clinical interview, and mental status testing as described above.
• After careful evaluation, a diagnosis of adult Attention Deficit Hyperactivity Disorder is made.

REFERENCES
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