Quality Care Network

Attention-Deficit/Hyperactivity Disorder (ADHD) in Adults

Guidelines for Management in a Primary Care Setting

What is Attention-Deficit/Hyperactivity Disorder (ADHD)?

ADHD is a neurodevelopmental disorder with onset in the developmental period. It manifests before age twelve – although it may be formally diagnosed much later – and results in impairments of personal, social, academic, or occupational functioning. Symptoms of ADHD include a persistent pattern of inattention and/or hyperactivity-impulsivity that is present in multiple settings (home and work, for example) and is not better explained by another mental health disorder, such as depression, anxiety or substance use.

How is Adult ADHD Unique?

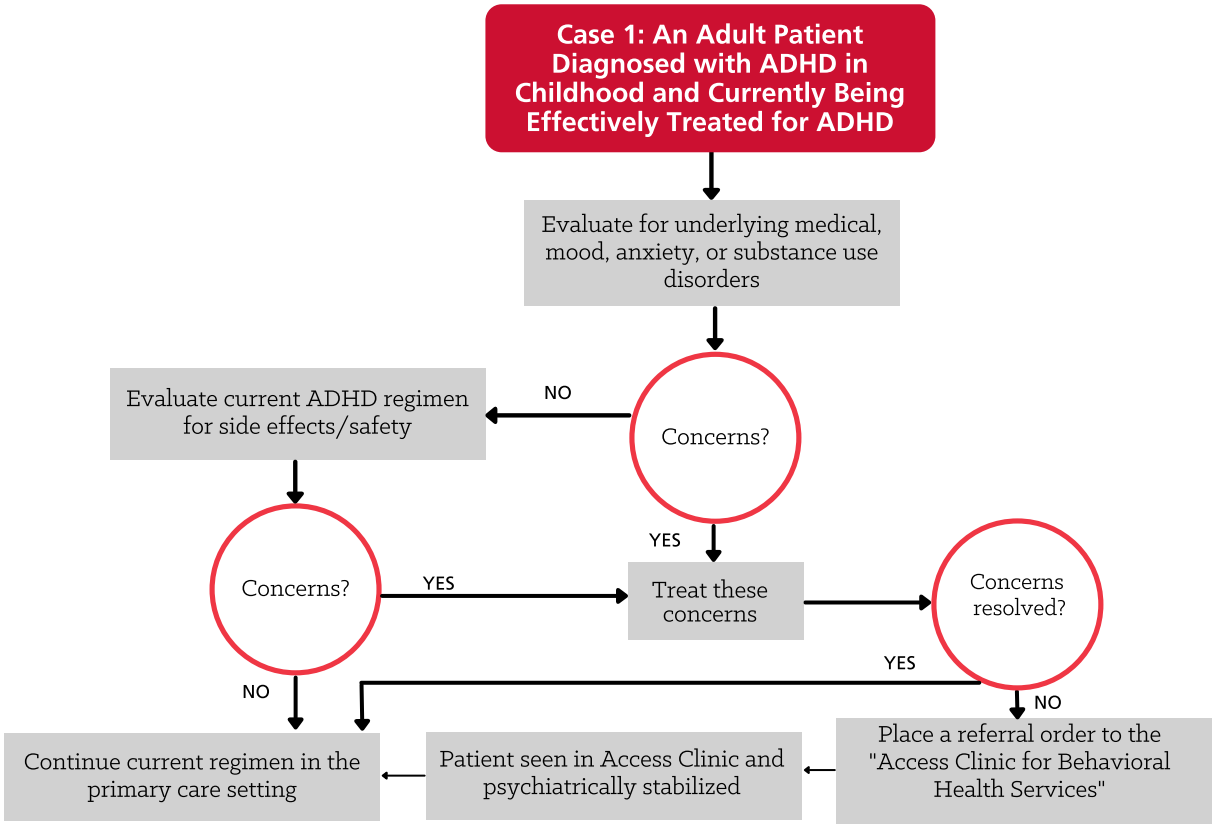
We are still working to understand the course of ADHD throughout an individual's lifetime. Despite ADHD being a neurodevelopmental disorder, one prospective study indicated that 90% of adults who meet diagnostic criteria for ADHD did not have ADHD in childhood. Furthermore, another study demonstrated that only 17% of children with ADHD continued to meet criteria for ADHD as young adults. Complicating the situation further, approximately one-half of adults with ADHD had other psychiatric or substance use diagnoses that cause similar inattention/executive dysfunction.

In short, adult ADHD symptoms alone does not mean that someone has ADHD. It is because of this diagnostic challenge that these guidelines have been developed to support primary care clinicians.

Case 1: An Adult Patient Diagnosed with ADHD in Childhood and Currently Being Effectively Treated for ADHD

In the case of an adult who was diagnosed with, and treated for, ADHD when they were a child and who would like to continue treatment for ADHD, we would recommend the following brief evaluation:

- Evaluate for underlying medical, mood, anxiety, or substance use disorders that might contribute to inattention/executive function symptoms.
- If no concerns for comorbid diagnoses, evaluate current regimen. If no side effects or safety concerns, it is reasonable to continue their current regimen following the guidelines set forth in UH's Controlled Substances Toolkit in the case of stimulant medications.
- If concerns for comorbid psychiatric or substance use disorders exist OR the patient's current regimen raises concern for safety or side effects, place a referral order to the "Access Clinic for Behavioral Health Services" for diagnostic clarity and treatment recommendations.
- Once any psychiatric or substance use comorbidities, safety concerns, and side effects have been addressed, the patient will be referred back to primary care for ongoing management of their chronic medications. If the clinical situation changes, a referral back to the Access Clinic may be indicated.



Case 2: An Adult Patient Diagnosed with ADHD in Childhood, but Not Currently Treated for ADHD

In the case of an adult who was diagnosed with – and treated for – ADHD when they were a child, is not currently being treated for ADHD, and who is now complaining of inattention/executive function symptoms, we would recommend the following brief evaluation:

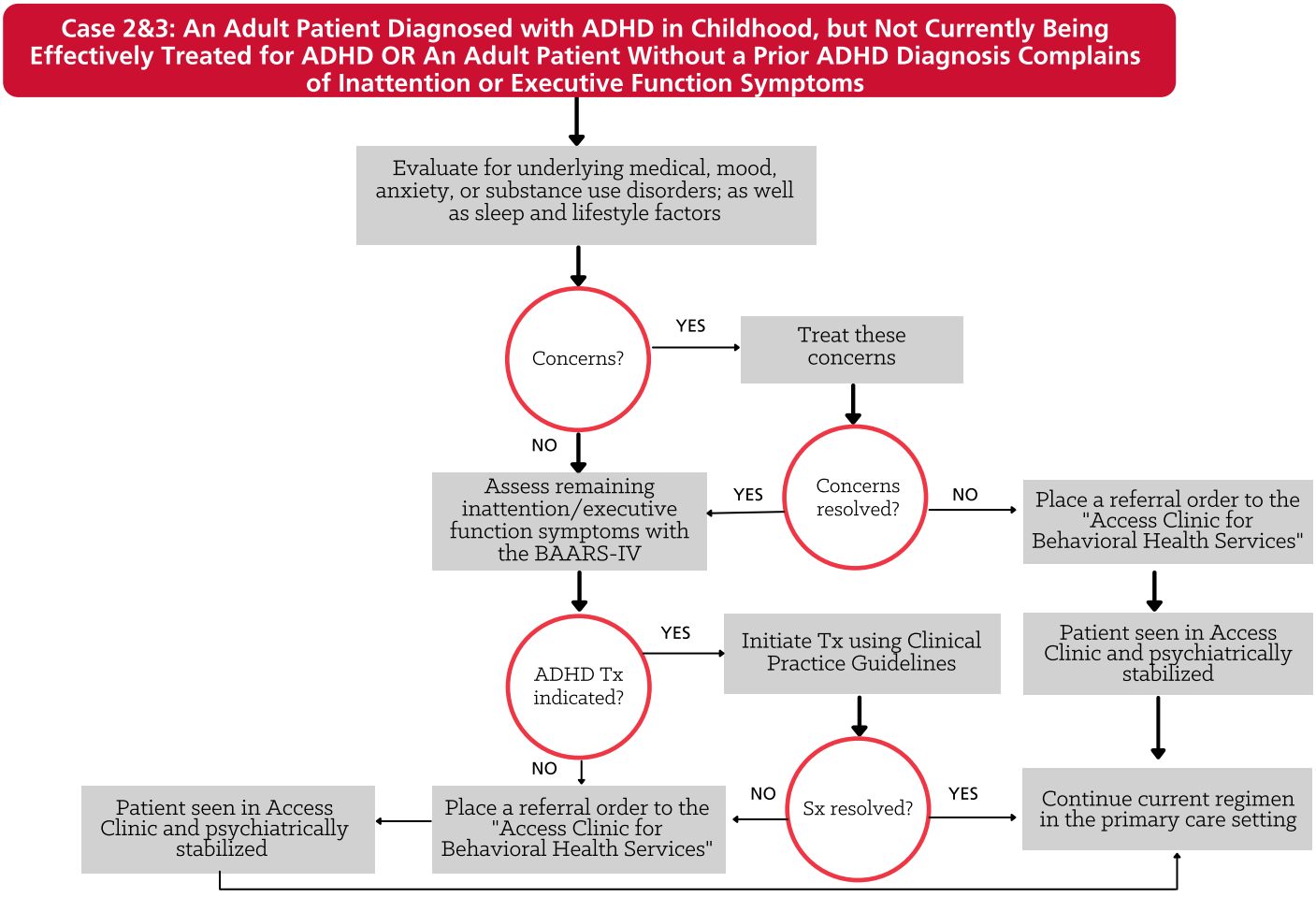
- Evaluate for underlying medical, mood, anxiety, or substance use disorders that might contribute to inattention/executive function symptoms.
- If there are comorbid mood or anxiety symptoms, recommend treatment of these conditions prior to assessing ADHD symptoms.
- If comorbid substance use disorders exist, work with patient to assess readiness to change and employ a harm-reduction approach to limit the impact of substances on their attention/executive function.
- Work with patient to optimize sleep and nutrition.
- Once these comorbidities and lifestyle factors have been addressed, recommend assessment of remaining inattention/executive function symptoms with the Barkley Adult ADHD Rating Scale IV (BAARS-IV)*
- If treatment for ADHD symptoms is indicated by the BAARS-IV, initiate treatment with:
  - First-Line: Consider non-stimulant medications : atomoxetine (Strattera) OR bupropion (Wellbutrin) per the prescribing tips below
  - Second-Line: Stimulant medications per the prescribing tips below
  - Third Line: Referral for non-pharmacological treatment using one of the options described below
- Reassess the patient regularly using the BAARS-IV scale at each visit to assess their response to treatment.
- If the patient does not experience improvement in their symptoms, as evidenced by the BAARS-IV scale, place a referral order to the "Access Clinic for Behavioral Health Services" for diagnostic clarity.

***Barkley Adult ADHD Rating Scale—IV (BAARS-IV)**
A copy of the BAARS-IV book is provided to each primary care practice within the UH system and copyright permissions have been obtained by UH for unlimited copying, for clinical use, of the four rating scales included in the book

Case 3: An Adult Patient Without a Prior ADHD Diagnosis Complains of Inattention or Executive Function Symptoms

An adult who was never diagnosed with ADHD as a child may have other diagnoses or lifestyle factors that are contributing to their perceived poor focus, concentration, or impulse control OR their diagnosis may have been missed in childhood. Regardless, ADHD in these cases is much lower on the list of differential diagnoses than mood, anxiety, neurocognitive (dementia), medical, and substance use disorders. Therefore, we would recommend the following brief evaluation:

- Evaluate for underlying medical, mood, anxiety, or substance use disorders that might contribute to inattention/executive function symptoms.
- If there are comorbid mood or anxiety symptoms, recommend treatment of these conditions prior to assessing inattention/executive function symptoms.
- If comorbid substance use disorders exist, work with patient to assess readiness to change and employ a harm-reduction approach to limit the impact of substances on their attention/executive function.
- Work with patient to optimize sleep and nutrition.
- Once these comorbidities and lifestyle factors have been addressed, if the patient does not experience subjective improvement in their inattention/executive function symptoms, assess their remaining inattention/executive function symptoms with the Barkley Adult ADHD Rating Scale IV (BAARS-IV).
- If treatment for ADHD symptoms is indicated by the BAARS-IV, initiate treatment with:
  - First-Line: Consider non-stimulant medications : atomoxetine (Strattera) OR bupropion (Wellbutrin) per the prescribing tips below
  - Second-Line: Stimulant medications per the prescribing tips below
  - Third Line: Referral for non-pharmacological treatment using one of the options described below
- Reassess the patient regularly using the BAARS-IV scale at each visit to assess their response to treatment.
- If the patient does not experience improvement in their symptoms, as evidenced by the BAARS-IV scale, place a referral order to the "Access Clinic for Behavioral Health Services" for diagnostic clarity. Please do NOT start patients on a stimulant medication and immediately refer them as it can make the upcoming psychiatric diagnostic assessment more challenging.



What Happens When a Patient is Referred to Access Clinic for Behavioral Health?

The process of evaluating a patient for ADHD in the Access Clinic for Behavioral Health is unique to each patient, but may involve:

- Obtaining records for any prior testing
- Full psychiatric diagnostic evaluation to identify any comorbid mental health conditions, to include ADHD symptoms
- Administration and/or review of BAARS-IV results
- Review of OARRS (prescription reporting system)
- Ordering and review of urine drug screen

Obtaining and reviewing all of this information may take more than one visit, so patients should not expect to leave their initial appointment with a prescription. Once all of the information has been reviewed by the psychiatric provider, treatment will begin. Once the patient's symptoms have stabilized, the patient will be referred back to primary care for ongoing management of their chronic medications.

Tips for Prescribing ADHD Medications

- **Atomoxetine (Strattera):**
  - The only non-stimulant medication approved by the FDA for the treatment of ADHD.
  - Should be considered for any patient with current or historical substance use disorders.
  - Starting dose is 40mg daily for at least 3 days, recommended dose is 80 mg per day, max dose is 100mg daily, can increase to 100mg after 2-4 weeks.
  - One reason to considering trial of atomoxetine prior to stimulant is that stimulants can worsen anxiety and cause palpitations. Additionally, many patients are reluctant to give atomoxetine a chance, and take it long enough to see if it will be helpful, after they have experienced the immediate effect of a stimulant medication.
- **Bupropion (Wellbutrin):**
  - While not FDA approved for treating ADHD, it is sometimes helpful for symptoms of inattention.
  - Should be considered in patients with comorbid depression, however may exacerbate anxiety.
  - May be used for patients with substance use disorders, as long as they do not have a seizure disorder or an eating disorder, as these are both contraindications to the use of bupropion.
  - Available as extended-release (Wellbutrin XL) with a starting dose of 150mg every morning and a maximum dose of 450mg every morning.
- **Stimulants:**
  - A variety of stimulant medications are available in both short-acting and extended-release preparations. Recommendations change frequently; an updated table of options is available at http://www.adhdmedicationguide.com.
  - If using stimulants for the treatment of ADHD in patients with a history of substance use, sustained-release preparations of stimulants clinically seem to reduce the potential for misuse, although clinical data are lacking to support this approach. The pro-drug lisdexamphetamine (Vyvanse) has a much slower onset that is dependent on liver metabolism to cleave the pro-drug into dextroamphetamine. This implies that whether ingested orally or intranasally, the rate of amphetamine conversion is fixed biologically. It is also not easily converted to amphetamine outside the body. For this reason, lisdexamphetamine is the most preferred formulation if misuse is a concern. Other delivery systems that deter abuse, such as the crush-resistant shell of Concerta or Daytrana patch, are preferable to formulations without these protections.
  - The most preferable dosing of stimulants is to use a single dose of a single agent at the lowest optimal effective dose, used daily. However, in adults, the use of multiple doses is often necessary to obtain the most effective window of symptom-control. The use of a larger dose of a long-acting formulation in combination with a small dose of an instant release formulation can often create a viable and manageable combination.Prescribers should have a maximum dose in mind for each agent they use (as well as the agents in combination), so that requests for dose increases do not become excessive. Individuals intent on recreational misuse or diversion may try to convince prescribers to increase dosing beyond reasonable maximums.
  - Since stimulants can exacerbate anxiety / irritability, it is important to consider decreasing the dose of a stimulant in a patient who is experiencing anxiety, rather than adding a benzodiazepine to treat the anxiety.
  - Addiction is a possible consequence of stimulant misuse. Patients who abuse stimulants to get high are likely to develop stimulant use disorder. However, there has not been a high correlation in the literature between stimulant prescription in childhood and progression to stimulant use disorder in adulthood. ADHD is correlated with later substance use issues, but other substances are frequently implicated.
  - Before prescribing any stimulant medication, consider patient's blood pressure, seizure history, personal and family cardiac history and follow the guidelines set forth in UH's Controlled Substances Toolkit.

Tips for Non-Pharmacological Management of ADHD Symptoms

While medication (stimulant or non-stimulant) is the first-line treatment for ADHD, there is a role for structured psychotherapy as it can help with executive functioning. Some patients may prefer to try psychotherapy prior to starting medication. Evidence shows that the following non-pharmacological treatments may be helpful in some ADHD cases.

- Cognitive Behavioral Therapy (CBT) has been used to treat deficits in executive functioning. There are two manualized CBT programs for ADHD4,5. These programs target procrastination, disorganization, and poor planning, by incorporating certain skills (planners, prioritization, time awareness, and creation of goals). Additionally they use cognitive reframing to help manage distortions that exist regarding perfectionism, anxiety, or depression. CBT for ADHD is typically offered for 12-15 sessions with patients completing homework in between appointments. Two-randomized trials comparing CBT versus supportive alternative demonstrated that CBT was efficacious in treating ADHD symptoms.
- Mindfulness: Studies that look at mindfulness for treatment of adult ADHD are mixed. Mindfulness may be helpful for the management of stress associated with ADHD as well as improvement in self-soothing.
- ADHD coaching targets deficits in planning, time management, organization, and problem solving. Coaches work with the patient collaboratively to help them understand how their disorder affects their life and to help them improve practical skills. Coaching differs from CBT interventions as it does not typically address emotional dysregulation or treatment of co-occurring diagnoses (depression, anxiety). Coaches are not trained to diagnose and treat mental illness and do not have to have a license.

Clinical Questions and Controversies in the Diagnosis and Treatment of Adult ADHD

Clinical understanding of ADHD in adults is still evolving and expert consensus is lacking in several key areas. Recognizing that each case is unique in many ways, we recommend that clinicians carefully consider the following when developing a treatment plan for their patients.

Use of Controlled Substances in the Setting of Active or Historical Substance Use Disorders. Stimulant medications have the largest effect size and highest tolerability of FDA-approved medications for ADHD in both children and adults. However, some providers are unwilling to prescribe stimulants for the treatment of ADHD, if the patient is using, or has a history of using, illicit substances. While we are not recommending a hard-and-fast rule about this, it is important to weigh the potential risks and potential benefits to the patients.

- A good first step in this process is obtaining a complete history of the patient's substance use, both current and historical. Checking a urine toxicology screen also may yield important information.
- In terms of the potential risks of prescribing any controlled substance, consider the following:
  - Does the patient meets criteria for a substance use disorder or not? The risk of triggering the addiction is greater in someone with a substance use disorder.
  - The risk of diversion, meaning giving away or selling the prescribed controlled substance, is likely greater in a person who is currently using illicit substances.
  - Some substances, such as cannabis, impact concentration, focus, and motivation. Patients may be requesting a stimulant to counteract the effect of the substance, which might in turn reduce their motivation to seek treatment for their substance use disorder.
- In terms of the potential benefits, consider how the patient's functioning is impacted by the symptoms of ADHD:
  - What activities is the person engaged in that require concentration and focus, such as employment or school?
  - Are there other areas of functioning that are significantly impacted by symptoms of ADHD, such as relationships?

- Use of stimulants in the setting of other prescribed controlled substances.
  - Since stimulants can exacerbate anxiety, it is important to consider decreasing the dose of a stimulant in a person who is experiencing anxiety, rather than adding a benzodiazepine to treat the anxiety, thereby having a person taking two controlled medications. One approach is to utilize medication treatment for the disorder causing the greatest functional impairment, and focus on psychotherapeutic interventions for the other disorder. If the clinical decision is that pharmacologic treatment with both is clinically necessary, the rationale for this should be documented at each visit. Each medication should be prescribed in the lowest effective dose.
  - Use of medical marijuana in combination with other controlled substances is strongly discouraged by University Hospitals, as set forth in the Controlled Substances Toolkit. Considering the impact of cannabis use on focus, concentration, and motivation, prescribers should carefully assess the complete clinical picture for patients using medical marijuana and follow the steps outlined in the Controlled Substances Toolkit should they choose to consider prescribing a stimulant medication in these cases.
- Risk of misuse. Misuse is a common issue, and is likely to occur in practices that prescribe stimulants routinely.
  - The most common form of misuse is overuse, and is often apparent if patients request early refills. Other forms of misuse are diversion, and non-oral use as an intoxicant. It is estimated that about 1/3 of persons prescribed stimulants have misused it at some point. Thus it is likely impractical to have a zero-tolerance policy of stopping stimulant prescription in the case of any misuse.

- The most common age/setting of prescription drug misuse is in college-age patients, likely related to availability and cultural norms of these settings. Fraternity/sorority settings are more likely to have misuse than general student populations. The most likely source of diverted stimulants is from a friend, or family member, and less likely a drug dealer. Students should be prepared by their prescriber to confront peer-pressure tactics from their friends.
- Screening questions that allude to the likelihood of misuse and inoculate against it include: Have you ever used more than prescribed? Have you ever been asked to give away your prescription? How do you secure your prescription? What would you say if someone asked you to sell them or give them your medication?
- A response when patients expose or confess to misuse is recommended, including preventive measures, policies, controls, and warnings. Discontinuation is always an option, as is reducing dosing and/or quantity, changing the stimulant to a less-abusable formulation, or switching to a non-stimulant medication. UH's Controlled Substances Toolkit contains many helpful resources for managing risk of misuse.

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