

Cognitive Symptoms and HIV

Information for Providers

How common are cognitive symptoms in people living with HIV?

Upward of 30 percent of individuals with HIV, including those with suppressed HIV viral loads, exhibit cognitive deficits (difficulty with thinking skills) on objective neuropsychological testing. Most commonly, patients' cognitive symptoms are mild, and may be caused by factors other than HIV.

Cognitive impairment deficits can include:

- ▶ Learning and memory
- ▶ Attention
- ▶ Information processing speed
- ▶ Language skills
- ▶ Executive function (e.g., problem solving, planning/organization, inhibition)
- ▶ Visuospatial skills
- ▶ Fine motor function

What are possible clinical warning signs?

- ▶ Difficulty with medication adherence
- ▶ Missed appointments
- ▶ Evidence of word-finding difficulties during visits
- ▶ Difficulty recalling recent information
- ▶ Disorganization
- ▶ Problems with focusing
- ▶ Lack of follow-up with treatment recommendations
- ▶ Patient report of difficulty with thinking skills

Facts about cognitive dysfunction in patients living with HIV:

- ▶ It is fairly common for people living with HIV to have some problems with thinking skills.
- ▶ Cognitive problems may be caused by the direct impact of HIV on the brain; however, many other medical, mental health, and substance use comorbidities, including traumatic brain injury (TBI), may cause cognitive dysfunction or contribute to it. In fact, among patients with undetectable HIV viral loads, these other causes of neurocognitive decline may be more common than HIV.
- ▶ Some patients may have cognitive symptoms related to their HIV despite having suppressed HIV viral loads. Several factors may contribute to HIV-related neurocognitive symptoms, including the impact the virus had on the central nervous system (CNS; consisting of the brain and spinal cord) before initiation of antiretroviral treatment and incomplete eradication of HIV virus in the CNS. In addition, certain antiretroviral medications may have neurotoxic effects. Symptoms of HIV-related neurocognitive disorders may be worsened by factors that affect memory and thinking in the general population, such as age, medical and mental health comorbidities, and adverse cognitive effects of medications.
- ▶ The term HIV-associated neurocognitive disorder (HAND) designates a spectrum of neurocognitive issues related to HIV infection.
- ▶ Among individuals with HAND, symptoms are typically mild and do not necessarily worsen over time. The rates of HIV-associated dementia have dropped considerably over the past few decades with earlier initiation of effective antiretroviral therapy, and this condition now is rare.

- ▶ For persons with HAND, optimizing antiretroviral therapy adherence and achieving viral suppression may have a significant impact on symptoms. In addition, treating medical and mental health comorbidities (e.g., TBI, depression, substance use) and discontinuing medications that may impair thinking (opiates, sedatives, hypnotics, anticholinergics, etc.) may reduce cognitive symptoms. Implementing compensatory cognitive strategies also may lessen the impact of cognitive decline on a patient's quality of life and daily function.

What can you do if you suspect your patient has cognitive deficits?

- ▶ Ask the patient about recent changes or problems with thinking skills
- ▶ Inquire about the onset and course of symptoms, and any medical or psychosocial precipitants
- ▶ Administer a brief screening tool (eg, MoCA); note that these screening tools are not sensitive for identifying mild neurocognitive decline
- ▶ If the HIV viral load is not suppressed, start or optimize ART treatment and adherence
- ▶ Screen for and treat factors that could contribute to cognitive symptoms in patients with HIV/AIDS, including:
 - Cerebrovascular risk factors (e.g., hypertension, coronary artery disease)
 - Metabolic dysfunction (e.g., diabetes, thyroid disorders)
 - Vitamin B12 deficiency
 - Mental health conditions (e.g., depression, anxiety)
 - Substance use – alcohol, marijuana, and many other substances can impair cognition
 - Hepatitis C and cirrhosis
 - Side effects of medications
 - TBI
- ▶ Minimize use of medications with negative cognitive side effects (e.g., opiates, sedatives, hypnotics, anticholinergics, THC)
- ▶ If the patient has TBI, refer for screening and treatment
- ▶ Suggest lifestyle modifications (e.g., exercise and diet) as appropriate
- ▶ Write down any critical information that the patient needs to know about their medical care and give it to the patient as a reminder

- ▶ If warranted, ask that a support person come with the patient to appointments during which critical treatment decisions or regimens will be discussed
- ▶ Continue to monitor change over time
- ▶ If cognitive symptoms persist and/or significantly interfere with a patient's daily function, refer for comprehensive neuropsychological assessment

How are cognitive symptoms formally evaluated?

Although many brief instruments are available for cognitive screening (e.g., MoCA), no single measure has been shown to consistently provide accurate diagnostic information. If cognitive symptoms persist after treatment of modifiable factors and/or interfere with daily function, refer for neuropsychological evaluation.

What are possible treatments targeted at cognitive symptoms?

- ▶ Cognitive compensatory strategies and implementation of positive health behaviors (e.g., sleep hygiene); see <http://braininjuryeducation.org/Treatment/Compensatory-Strategies/>
- ▶ Cognitive rehabilitation
 - Structured treatment with a qualified provider to identify strategies to compensate for and cope with cognitive symptoms

HIV-Associated Neurocognitive Disorder (HAND)

HAND is a diagnostic classification system that classifies the scope and severity of cognitive and functional impairment resulting from the effects of HIV on the brain.

For more information regarding HAND:

<https://www.hiv.uw.edu/go/basic-primary-care/screening-mental-disorders/core-concept/all#neurocognitive-disorders-persons-living-hiv>