

Tips for HIV Clinicians Working with Patients with Substance Use Disorders

Defining “Substance Use Disorders” and “Addiction”

Substance Use Disorders are a diagnostic term used in DSM-5 referring to the recurrent use of alcohol or other drugs that causes “clinically significant impairment in social, occupational, or other important areas of functioning”¹. Substance Use Disorders are classified as mild, moderate, or severe. The term “addiction” is an older term that refers to what in DSM-5 would now be classified as a severe substance use disorder. Addiction can be defined as “a primary, chronic disease of brain reward, motivation, memory, and related circuitry. Dysfunction in these circuits leads to characteristic biological, psychological, social and spiritual manifestations.”² It is important to note that not all substance use represents addiction.

Addiction as a Brain Disease

Decades of research have revealed addiction to be a disease that alters the brain. We now know that while the initial decision to use substances is voluntary, addiction is a disease of the brain that compels a person to become singularly obsessed with obtaining and using substances despite their many adverse health and life consequences. Imaging technology reveals the same type of organ damage to the brain in addiction as one sees with, for instance, damage to the heart in heart disease. Alcohol and other drugs cause much of their damage to the brain via a disturbance in neurotransmitters such as dopamine, serotonin, and norepinephrine. Damage to the brain is often long-lasting and the brain may require a number of years of abstinence to return to a pre-drug level of functioning.

Vulnerability to Addiction

No simple way exists to determine who will become addicted to a substance. Vulnerability to addiction varies from person to person and is based on a number of factors, including biological, environmental, and genetic influences. Aspects of the substance itself also play a role, including when it was first used, how it was first used, cost, and availability. Adolescents are particularly vulnerable to addiction because the brain is still in development and can be profoundly impacted by substance use. Childhood trauma, or Adverse Childhood Experiences (ACE’s), also play a strong role in the development of an addiction. Adults who suffered four or more ACE’s are 7 times more likely to have a severe alcohol use disorder than those who had no ACE’s, and are approximately 13 times more likely to use injection drugs.³

Neurochemical Impact of HIV and Addiction

HIV virus is sometimes detected in the cerebrospinal fluid (and thus the brain) even when patients are stabilized on antiretroviral treatment and have an undetectable plasma viral load. This persistence of virus in the brain is associated with increased risk for depression.⁴ From studies in mice, it appears that expression of a particular protein involved in HIV viral replication is associated with depression symptoms and increased sensitivity to methamphetamine effects in the brain.⁵ This suggests that even individuals with an undetectable viral load may be vulnerable to depression. It also suggests that people living with HIV (PLWH) are more vulnerable to developing dependence on methamphetamine than non-PLWH. Methamphetamine in turn increases HIV transmission risk by lowering sexual inhibitions, impairing judgment, causing mucosal dryness, reducing adherence to HIV medication regimens, and accelerating the progress of HIV-related dementia.⁶

Intersectionality of HIV and Addiction

Intersectionality is a framework for understanding how macro-level forces of oppression, i.e., racism, sexism, heterosexism, etc., interact to produce exponential increases in health disparities. Intersecting identities may include

qualities like immigration status, HIV status, and status as a substance user. An example might be a Black, HIV-positive, transgender, substance-using woman who has to contend with HIV-related stigma, substance-related stigma, racism, sexism, and transphobia, and the impact that those forces have on her access to healthcare.⁷ LGBT-related stigma and minority stress also lead to health disparities and are risk factors for substance use disorders.⁸

Recovery

Recovery can be defined as both a process and a status. Despite the perception that people with severe substance use disorders are “lost causes”, people can and do recover from addiction, utilizing services and supports such as self-help groups (i.e. AA), formal treatment programs, and recovery supports such as sober living and community centers.⁹ Formal treatment includes behavioral approaches such as cognitive-behavioral therapy, motivational interviewing, and contingency management, and medications like naltrexone and buprenorphine.

Treatment Recommendations

It is important to integrate substance use disorder treatment and prevention into HIV primary care, both to improve HIV-related outcomes and to reduce long-term costs. Specific principles of recovery from addiction include: recovery emerges from hope; recovery is person-centered; there are many pathways to recovery; recovery is supported by peers, allies and social networks; recovery is culturally-based and influenced; and recovery is supported by addressing trauma.¹⁰ Brief motivational interventions can be delivered by virtually anyone on the healthcare team and may help reduce a patient’s substance use. Remember that substance use prevention and treatment is HIV prevention.

References

1. American Psychiatric Association. (2013). Diagnostic and statistical manual of mental disorders (5th Ed.). Washington, D.C.
2. American Society of Addiction Medicine. (2011, April 12). Public policy statement: definition of addiction. Retrieved from: <https://www.asam.org/resources/definition-of-addiction>.
3. Felitti, V.J., Anda, R.F., Nordenberg, D., et al. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245-258.
4. Hammond, E., Crum, R., Treisman, G. et al. (2016). Persistent CSF but not plasma HIV RNA is associated with increased risk of new-onset moderate-to-severe depressive symptoms; a prospective cohort study. *Journal of Neurovirology*, 22, 479-487.
5. Kesby, J., Markou, A., & Semenova, S. (2016). The effects of HIV-1 regulatory TAT protein expression on brain reward function, response to psychostimulants, and delay-dependent memory in mice. *Neuropharmacology*, 109, 205-215.
6. Yeon, P.A., & Albrecht, H. (2007). Crystal meth and HIV/AIDS: The perfect storm? *NEJM Journal Watch*, 12/3/2007.
7. Lacombe-Duncan, A. (2016). An intersectional perspective on access to HIV-related healthcare for transgender women. *Transgender Health* 1(1), 137-141.
8. A Provider’s Introduction to Substance Abuse Treatment for Lesbian, Gay, Bisexual, and Transgender Individuals, Second Edition. (2017). Pacific Southwest ATTC, Young Men Who Have Sex With Men and LGBT Center of Excellence.
9. Kelly, J.F., Bergman, B., Hoepfner, B.B., Vilsaint, C., & White, W.L. (2017). Prevalence and pathways of recovery from drug and alcohol problems in the United States population: Implications for practice, research, and policy. *Drug and Alcohol Dependence*, 181, 162-169.
10. SAMHSA. (2012). SAMHSA’s Working Definition of Recovery: 10 Guiding Principles of Recovery. Retrieved from: <https://store.samhsa.gov/shin/content/PEP12-RECDEF/PEP12-RECDEF.pdf>.

This fact sheet was prepared and reviewed by: James Peck, PsyD, Albert Hasson, MSW, Beth Rutkowski, MPH, and Thomas Freese, PhD – Pacific Southwest Addiction Technology Transfer Center/UCLA Integrated Substance Abuse Programs; Phil Meyer, LCSW; Maya Gil Cantu, MPH; Kevin-Paul Johnson; and Tom Donohoe, MBA – Pacific AIDS Education and Training Center, Los Angeles Region.