

Addressing the Syndemic of Opioid Use Disorder, HIV, and HCV

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As we focus on reducing opioid-related deaths through enhanced prevention and substance use disorder (SUD) treatment, it is crucial to realize the role opioid addiction plays in the spread of infectious disease. An estimated 6 percent of new HIV diagnoses in the U.S. in 2015 were among people who inject drugs (Centers for Disease Control and Prevention (CDC), 2017). HIV can be successfully managed with antiretroviral therapy (ART), but we must not forget that those most at risk of contracting HIV may also lack access to interventions to prevent and successfully treat it. What's more, HIV's spread is entangled with that of the virulent and dangerous virus, hepatitis C (HCV). Thus the "opioid epidemic" is really a set of overlapping epidemics sharing many of the same contributing factors and conditions—a syndemic (Perlman & Jordan, 2018)—and addiction counselors have a critical role to play in reducing the toll of all these conditions.



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Stigma against people with drug addiction continues to hinder efforts to treat and prevent the spread of infectious disease, just as it continues to limit the adoption and use of medications for opioid use disorder. Infectious disease physicians might be hesitant to treat people with SUDs, not only because they lack the necessary training but also because they may be concerned these individuals will not be adherent to their ART regimens. Improved training of all medical providers in screening for and addressing addiction, as well as addressing stigma toward drug users, remains an area of high-priority research at National Institute on Drug Abuse (NIDA) (NIDA, 2018).

We know how to prevent transmission of HIV and, to a lesser extent, HCV; the trouble is getting communities to adopt the appropriate measures. Syringe services programs are an example of an evidence-based strategy that could be expanded. These programs have been shown to be highly effective at reducing transmission of infectious diseases while not leading to increased drug use (CDC, 2018). Not only do such programs reduce the sharing of needles among drug users, they also provide the opportunity to link people to screening for HIV/HCV and to SUD treatment. Addressing SUD reduces the risk of an individual transmitting or contracting an infectious disease—the “treatment as prevention” principle.

Educating policymakers and those working in healthcare and justice systems about the benefits of implementing evidence-based approaches—and overcoming stigma—continues to be important. Last October, Gregg Gonsalves, a MacArthur “Genius” award-winning investigator at Yale and his coauthor Forrest W. Crawford published a modeling analysis showing that faster implementation of syringe-services programs and other harm-reduction measures could have prevented the majority of the new HIV cases in the widely publicized outbreak in Scott County, Indiana in 2014-2015 (2018).

HCV is also a concern. Incidences of this extremely contagious disease increased by 133 percent between 2004 and 2014 (Zibbell et al., 2018), and HCV currently kills more Americans than all other infectious diseases combined (Page, Cox, & Lum, 2018). Along with hepatitis B, HCV is the leading cause of liver cancer in the U.S. Because it is typically asymptomatic, it often goes undiagnosed and is hard to track; thus, cases are likely underreported.

Unlike HIV, medications are available that completely cure HCV in most cases. However, the medications are expensive, and access to them is a challenge. There is no vaccine for HCV, and because of its virulence, finding one is a top public health priority. Fortunately, science is making advances and we are learning more about this disease, who it affects, and how it affects them. For example, it has recently been found that females who inject drugs are at a greatly increased risk of contracting HCV compared to males, yet they also spontaneously clear the virus at higher rates than males and show slower disease progression (Page, Cox, & Lum, 2018). Such findings could provide important guidance in developing a vaccine for HCV.

Although there is no vaccine for HIV yet either, there multiple approaches have been developed to prevent transmission. Pre-exposure

prophylaxis or PrEP is available to individuals engaging in high-risk behaviors to reduce their chances of contracting HIV. Evidence shows that PrEP is effective in preventing acquisition of HIV in people who inject drugs (Chooanua et al., 2013). However, this intervention is underutilized and accessibility for people who inject drugs is limited. Research on access and adherence to ART can inform strategies to improve utilization of PrEP. One of the main factors facilitating ART adherence, according to a recent study, is receiving medication treatment for opioid use disorder (Brazzi et al., 2019), further showing that when drug addiction is addressed, it can have much wider benefits in health and healthcare engagement.

The entanglement of opioid addiction with HIV and HCV presents both a challenge and an opportunity for those who find themselves on the front lines of these public health battles. Addiction counselors are uniquely positioned to not only address SUDs but also to improve the overall health of their clients and entire community. This can be accomplished by linking people who inject drugs to screening and treatment for HIV and HCV. Ensuring appropriate care, including medications, for those struggling with opioid use disorders can greatly increase adherence to ART. Encouraging the use of PrEP and participation in syringe services programs can also reduce the risk for transmission of HIV and HCV. Finally, ensuring patients and family members have access to naloxone can save lives and help prevent opioid-related overdoses.

REFERENCES

- Bazzi AR, Drainoni ML, Biancarelli DL, et al. Systematic review of HIV treatment adherence research among people who inject drugs in the United States and Canada: evidence to inform pre-exposure prophylaxis (PrEP) adherence interventions. *BMC Public Health*. 2019;19(1):31.
- Centers for Disease Control and Prevention (CDC). HIV and Injection Drug Use. 2017. <https://www.cdc.gov/hiv/risk/idu.html>.
- Centers for Disease Control and Prevention. Syringe Services Programs. 2018. <https://www.cdc.gov/hiv/risk/ssps.html>
- Choopanya K, Martin M, Suntharasamai P, et al. Antiretroviral prophylaxis for HIV infection in injecting drug users in Bangkok, Thailand (the Bangkok Tenofovir study): a randomised, double-blind, placebo-controlled phase 3 trial. *Lancet*. 2013;381:2083-2090.
- Gonsalves GG, Crawford FW. Dynamics of the HIV outbreak and response in Scott County, IN, USA, 2011–15: a modelling study. *Lancet HIV*. 2018;5(10):e569-e577.
- National Institute on Drug Abuse. NIDA AIDS Research Program Strategic Planning Workshops. 2018. <https://www.drugabuse.gov/offices/office-nida-director-od/aids-research-program-arp/past-meeting-reports-presentations/nida-aids-research-program-strategic-planning-workshops>.
- Page K, Cox A, Lum PJ. Opioids, hepatitis C virus infection, and the missing vaccine. *Am J Public Health*. 2018;108(2):156-157.
- Pelman DC, Jordan AE. The syndemic of opioid misuse, overdose, HCV, and HIV: structural-level causes and interventions. *Curr HIV/AIDS Rep*. 2018;15:96.
- Zibbell JE, Asher AK, Patel RC, et al. Increases in acute hepatitis C virus infection related to a growing opioid epidemic and associated injection drug use, United States, 2004 to 2014. *Am J Public Health*. 2018;108(2):175-181.



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