When Perfect Is the Enemy of Tested: a Call to Scale Rapid HIV Testing for People Who Inject Drugs

Justin Alves, RN MSN ACRN CARN CNE[1,2], Jessica Stewart, BA[3], Glorimar Ruiz-Mercado, MD[3], and Jessica L. Taylor, MD[1,2]

[1]Clinical Addiction Research & Education (CARE) Unit & Grayken Center for Addiction, Boston Medical Center, Boston, MA, USA; [2]Section of General Internal Medicine, Boston University School of Medicine & Boston Medical Center, Boston, MA, USA; [3]Section of Infectious Diseases, Department of Medicine, Boston Medical Center, Boston, MA, USA.

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Increased HIV transmission among people who inject drugs (PWID) has been a morbid consequence of the opioid and polysubstance use disorder epidemics in regions across the USA. Early HIV diagnosis is a critical component of the public health response to HIV outbreaks. The 2021 Centers for Disease Control and Prevention (CDC) Sexually Transmitted Infections Treatment Guidelines, published in July, recommend laboratory-based HIV antigen/antibody (Ag/Ab) tests, which can detect acute HIV infection as soon as 15 days after exposure, as first-line for HIV screening. These laboratory-based tests (LBT) have become the gold standard in many academic- and community-based programs that serve PWID and may detect acute HIV a week or more before commonly used point-of-care rapid HIV tests, which detect HIV antibodies only. CDC guidelines therefore recommend limiting rapid HIV testing to scenarios where patients are unlikely to follow-up to receive results.

In our work providing low-barrier substance use disorder treatment and drop-in and outreach-based harm reduction services to PWID in Suffolk County, MA, a priority jurisdiction under the federal Ending the HIV Epidemic plan for the USA, the role for rapid HIV testing is broader. Rapid testing is also necessary and valuable in settings where patients are likely to follow-up but are not currently being tested due to phlebotomy- and stigma-related barriers. A growing body of data supports delivery of HIV screening and prevention care where PWID already spend time and access services, including non-clinical settings such as syringe service programs (SSP), mobile vans, street outreach, and pop-up harm reduction sites.[1,2] Many of these welcoming yet less structured environments face challenges meeting logistical and regulatory requirements for phlebotomy and must refer patients to other sites for LBT, decreasing the chances of screening completion.[3] Rapid HIV testing, done on fingerstick or oral fluid samples, is easier to implement in many low-barrier settings.

Even when phlebotomy is available, PWID can be deterred from LBT due to clinical and structural barriers including difficult venous access, experiences of stigma associated with revealing venous scarring, and competing stressors and demands.[4] Our hospital-based, low-barrier substance use disorder bridge clinic is located mere feet from a phlebotomy station, yet regularly misses opportunities to screen PWID at high risk who decline LBT. The HIV counselors embedded in our Emergency Department (ED) also describe limited uptake of LBT among PWID, particularly when patients' reason for ED visit does not require other phlebotomy. Earlier this year, we began to offer rapid HIV testing after discussing the relative pros and cons of each type of testing. Anecdotally, in both the bridge clinic and ED settings, we have found our patients appreciate rapid testing not only for the opportunity to be screened—when they otherwise would not have been—but also for the chance to receive their results in real time from a trusted team member, given current high anxiety about HIV transmission in the community.

A rapid testing option also supports the more frequent screening that an HIV outbreak demands. For example, in Boston, MA, which has had an ongoing HIV outbreak among PWID since 2019, we recommend that PWID test monthly.[5] Frequent, rapid testing can also facilitate linkage to other HIV prevention services, including HIV pre-exposure prophylaxis (PrEP), the use of daily oral tenofovir disoproxil fumarate/emtricitabine to prevent HIV in people who are HIV negative and have sexual- or injection-related risk.[1] Rapid and phlebotomy-based tests are also not mutually exclusive;

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[1]Two other medications, daily oral tenofovir alafenamide/emtricitabine and long-acting injectable cabotegravir, are also approved by the Food and Drug Administration for PrEP for people with sexual but not injection-related HIV risk. Daily tenofovir disoproxil fumarate/emtricitabine is the only regimen with a component studied in people with injection-related risk.

PWID in many circumstances—including high clinical concern for acute HIV—benefit from simultaneous phlebotomy-based Ag/Ab and HIV RNA and rapid testing to enable real-time delivery of the rapid result.

Of course, the care of patients unlikely to follow-up for results remains an important setting for rapid testing. The turnaround time for LBT results—typically several hours to several days—greatly complicates disclosure in a population that often lacks reliable access to phones. Structural barriers, including homelessness and incarceration, further complicate the process of returning to a site in-person to receive results. Prior work in a drug detoxification center serving many PWID at risk of HIV infection demonstrated that those who received rapid HIV testing were more than twice as likely as those who received LBT to obtain their results within 2 weeks.[6]

However, presenting HIV rapid testing as an exception to LBT to be used only in the narrow setting of barriers to follow-up may create unintended hurdles to screening PWID at the highest risk by driving LBT-only clinical protocols and shifts in public health funding away from rapid testing supplies, personnel, and administrative infrastructure. To confront the surge in new HIV infections due to worsening opioid and polysubstance epidemics—compounded by a housing crisis and the COVID-19 pandemic, which reduced already limited baseline HIV testing at SSPs—in the USA, we must able to provide the available range of HIV testing strategies at all sites serving PWID.[7,8]

A broader application of rapid HIV testing promises to improve testing access for a highly stigmatized and especially vulnerable community of patients. It is our responsibility to talk to patients about the characteristics of different HIV testing strategies so they can make an informed decision, while never losing sight of the reality that the most sensitive HIV screening test is the one a patient is willing and able to get. The benefits of screening more PWID via expanded rapid HIV testing outweigh the relative limitations of rapid tests.

Corresponding Author: *Jessica L. Taylor, MD; Section of General Internal Medicine, Boston University School of Medicine & Boston Medical Center, Boston, MA, USA (e-mail: Jessica.Taylor@bmc.org).*

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