Expanding the Evidence on Integrated Opioid Use Disorder and Infectious Disease Care

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Low-barrier to access programs has emerged as a way to overcome the significant hurdles associated with buprenorphine initiation. However, there has been limited research evaluating services set in low-barrier programs outside of buprenorphine. In this issue of the *Journal of Addiction Medicine*, Harvey and colleagues evaluate a sexually transmitted and blood-borne infection screening protocol implemented in a low-barrier access program in Boston, Massachusetts. The data supports that infection protocols can be efficiently implemented in the low-barrier setting, yielding high rates of diagnosis, and the potential for decentralized models of treatment.

Key Words: buprenorphine, hepatitis C, low-barrier, opioid use disorder, sexually transmitted infections

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Progress addressing the rising opioid epidemic has been limited, in part due to low rates of treatment with medication for Opioid Use Disorder (OUD). Suboptimal uptake of medications for OUD (MOUD) is due to a number of barriers, including insufficient workforce, resource limitations outside of urban centers, lack of treatment infrastructure within healthcare systems,[1] and undue requirements to engage in care.

Low-barrier to access programs (LBAP) has emerged as a practical and evidence-based intervention to address these significant gaps in the continuum of care for OUD. LBAP is typically defined by same-day or rapid-start initiation of buprenorphine, reduced in-person requirements such as urine drug testing, and are delivered through nontraditional, flexible models including via street outreach,[2] and mobile technology.[3] These programs have been shown to improve buprenorphine uptake and retention in individuals awaiting traditional opioid treatment programs,[4,5] as well as in marginalized subpopulations of the OUD epidemic, including those experiencing homelessness,[2] those recently released from jail or prison,[6] and in young adults.[7] In the United States, LBAP are an emerging phenomenon, but have been raised as a potential setting to better engage the high-risk OUD population through expanded services. Yet, the very factors which underscore the success of LBAP may limit the capacity for additional services, necessitating evidence on which services are both warranted and feasible.

In parallel to the OUD, epidemic is a rise in infectious diseases associated with opioid use. These include infections transmitted through injection drug use (IDU), such as hepatitis C (HCV) and HIV; infections related to bacterial or fungal contamination of drug use paraphernalia, such as infective endocarditis; and infections related to high-risk sexual practices in the setting of decreased inhibitions, chemsex, or transactional sex, including syphilis, gonorrhea, and chlamydia.

In this issue of the *Journal of Addiction Medicine*, Harvey and colleagues evaluate a sexually transmitted and blood-borne infection screening protocol implemented in an LBAP in Boston, Massachusetts. Like many LBAP, high-risk clientele was targeted for linkage to the clinic, including individuals recently hospitalized or incarcerated. Intake to the LBAP was traditionally conducted by a nurse, followed by a physician visit. Opt-out screening for infections was initiated at intake, and included urine testing for gonorrhea and chlamydia, and blood testing for hepatitis A (HAV), hepatitis B (HBV), HCV, HIV, and syphilis.

Of note, only data from individuals who completed intake and who had at least 1 screening lab were included in the analysis, limiting the capacity to evaluate associations between cohort characteristics and screening completion. Furthermore, the lack of transparency on why screening labs were not obtained represents an unknown yet significant source of bias, potentially excluding individuals with challenging venous access, insurance issues, or those with employment or childcare pressures on their time.

Nearly 400 patients were included in the analysis, with high rates of unstable housing, polysubstance use, and prior overdose, supporting the vulnerable nature of the LBAP population. While only one third of patients completed all 7 infectious disease screens, there was a significant

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association between nurse-led intake visits and full panel completion, compared to physician-led intakes. Intake screening identified moderate prevalence of HIV, HCV, and HBV, consistent with other OUD cohorts, but also diagnosed high rates of unknown infections, and low rates of HAV and HBV vaccination. While bacterial STIs were treated on-site, referrals for HCV treatment resulted in poor rates of linkage, and unknown rates of treatment initiation.

On-site screening and treatment of bacterial STI in people with OUD represents a significant achievement. Previous studies have demonstrated a strong association between drug use and risk of STI,[8] yet infections related to IDU associated transmission and contamination have been the focus of integrated services. While STI remains undertreated across all populations, individuals with drug use face additional barriers to care, and exponential risk through overlapping drug use and sexual networks, transactional sex, and chemsex.[8]

Unfortunately, linkage to evaluation and treatment of HCV was not as successful in this population. One evidence-based strategy to improve this may be co-location of HCV and OUD care. Not only is integrated HCV treatment feasible in MOUD settings,[9] but HCV treatment may be synergistic with provision of MOUD.[10] Furthermore, studies have shown that co-location of direct-acting antivirals and MOUD can improve adherence and retention in care for both.[11] As such, LBAP may serve as an ideal setting to go beyond co-location of testing, and offer integrated HCV treatment.

An important finding of this investigation is that the implementation of an ID screening algorithm in the LBAP setting need not be reliant on a physician (and perhaps, should not be). In the modern era, treatment for STI and HCV need not be, either. Physicians are the most expensive and least flexible part of healthcare staffing, are concentrated in urban and academic settings, and most critically, are often not necessary for successful STI[12] or HCV treatment.[13] STI treatment is standardized, with longstanding safety data and high efficacy, and nurse-driven administration in many clinical settings. HCV treatment, too, is becoming increasingly simplified and decentralized, with treatment models moving away from physician-based care.[13,14] As most LBAP operate through a grant-based funding model, establishing a model of care that minimizes dependence on physician time may contribute to long-term sustainability.

This investigation by Harvey and colleagues provides some of the first evidence on ID care integration in the LBAP setting, and helps guide the recommendation that testing and treatment for these highly prevalent and morbid diseases can and should be integrated into LBAP infrastructure. Through the use of standardized protocols and decentralized care, LBAP may represent a new frontier in integrated care for OUD and syndemic infections.

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