COVID-19 Vaccination and Communicable Disease Testing Services’ Integration Within a Syringe Services Program: A Program Brief

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Abstract

People who inject drugs often have a higher prevalence of risk factors associated with coronavirus disease 2019 (COVID-19) infection and associated morbidity and mortality, compounded by challenges in health care access. This increased vulnerability underscores the critical need to prioritize people who inject drug in ongoing COVID-19 vaccination efforts. Co-location of syringe services, COVID-19 vaccination services, and other communicable disease testing has proved an effective model to provide necessary interventions without creating additional barriers. Here, we describe a partnership between the Baltimore City Health Department, Johns Hopkins Mobile Vaccine Unit, and the Center for Infectious Disease and Nursing Innovation at the Johns Hopkins School of Nursing to provide COVID-19 vaccination, HIV and sexually transmitted infection testing, wound care, and linkage to care services co-located with a long-running syringe services program. We describe the services offered by each partner and lessons learned from this community-based co-location of services initiative.

Key words: hepatitis C, HIV, needle exchange, COVID-19 vaccination

People who inject drugs (PWIDs) often have a higher prevalence of risk factors associated with coronavirus disease 2019 (COVID-19) infection. For instance, PWID may engage in communal activities that make social distancing difficult, such as purchasing, preparing, and injecting drugs together (Vasylyeva et al., 2020) or relying on sex work for income (Singer et al., 2020). Stigmatization experienced within health care settings has also been found to influence health care-seeking behavior among PWID (Muncan et al., 2020). Additionally, PWID experience higher rates of comorbidities, such as HIV, diabetes, and hypertension, which may make them more susceptible to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-related morbidity and mortality (Iversen et al., 2021; Vasylyeva et al., 2020). For example, one retrospective case-control study of over 73 million electronic health records found that those with opioid use disorders had 10 times the odds of being diagnosed with COVID-19 and were also found to have higher death rates (Wang et al., 2021). Due to the increased risk for transmission in this population and their higher vulnerability to SARS-CoV-2-related infection, morbidity, and mortality, it is critical that they be prioritized in ongoing SARS-CoV-2 vaccination efforts.

Although there are data demonstrating lower uptake of vaccinations for PWID, including for the hepatitis B (Raven et al., 2018) and influenza vaccines (Price et al., 2021), a recent study demonstrated that 57% of respondents who inject drugs would opt to receive COVID-19 vaccination if it was available (Iversen et al., 2021). However, several barriers must be overcome to reach this population. These include distrust in the health care system, structural factors such as lack of access to transportation and housing instability, and stigmatization that makes them less likely to seek care (Barocas, 2021).

Co-location of services has proved an effective way to provide necessary interventions to prevent, treat, and diagnose communicable diseases without creating additional barriers. For example, a recent systematic
review by Mizuno et al. (2019) found that co-location of services such as drug abuse treatment and tuberculosis care with HIV services improved HIV care outcomes, including antiretroviral adherence and linkage to care. Similarly, the co-location of HIV and hepatitis C services has also been identified as an effective model for providing integrative services to highly vulnerable populations, including PWID (Rosenthal et al., 2020). In an effort to improve COVID-19 vaccination access for PWID living in Baltimore, Maryland, the Johns Hopkins COVID-19 mobile vaccination clinic partnered with the Baltimore City Health Department (BCHD) to co-locate vaccination services within a syringe services program (SSP). Here, we describe how these services were co-located and lessons learned for other organizations seeking to conduct similar outreach activities to improve COVID-19 vaccination rates within vulnerable populations.

Program Description
The following is a description of services offered by each participating partner.

Baltimore City Health Department
The BCHD SSP is one of the longest continuously running needle exchange programs in the United States. In addition to needle exchange, they offer HIV testing and counseling, syphilis testing, opioid overdose response training with naloxone distribution, naloxone rescue, and linkage to opioid treatment programs (Baltimore City Health Department, 2021). The SSP operates at 16 locations with 26 weekly time slots throughout the city of Baltimore (Baltimore City Health Department, 2021). Their consistency in providing services in a nonjudgmental manner allowed for a seamless partnership with Johns Hopkins to improve access to COVID-19 vaccinations within PWID. This partner provided their SSP van, from which BCHD staff delivered the high-quality and confidential services they routinely provide while also connecting clients to COVID-19 vaccination. Additionally, a physician from BCHD was on-site to provide wound care and referrals for individuals who required emergent services.

Johns Hopkins Mobile Vaccine Unit
In early Spring 2021, Johns Hopkins Medicine established a mobile vaccine unit to provide COVID-19 vaccines to vulnerable and hard-to-reach populations in Baltimore (Smith, 2021). They established diverse relationships with community partners to deliver vaccines and eliminate access barriers, including funding for transportation to subsequent vaccine appointments for those who received the two-dose series. This team consisted of a physician and/or advanced practice registered nurse providing medical oversight and vaccine operations supervision, a pharmacist to manage vaccines, including one- and two-dose series, registration staff to ensure clients’ vaccination was documented and to connect them for second vaccine doses, and observers who managed an observation tent after vaccination. The pharmacist from this team was equipped with an anaphylaxis kit, which included epinephrine, H1 antihistamines, and albuterol.

The Center for Infectious Disease and Nursing Innovation of The Johns Hopkins School of Nursing
The Johns Hopkins School of Nursing’s Center for Infectious Disease and Nursing Innovation (Center for Infectious Disease and Nursing Innovation of The Johns Hopkins School of Nursing, 2021) provided point-of-care testing for HIV, syphilis, and hepatitis C. Additionally, this partner provided a privacy tent for urogenital and pharyngeal swabs for gonorrhea (GC) and chlamydia (CT). Clients were counseled on process for self-collection of these swabs, which were sent to a partner laboratory for testing. For point-of-care tests, Center for Infectious Disease and Nursing Innovation (CIDNI) staff delivered results on site. For GC/CT swab results, a member of the CIDNI staff followed up with clients by telephone. Those who were positive for any test had their results delivered by a trained clinician who conducted a brief interview, provided linkage to a health care provider in the client’s desired neighborhood, and addressed any questions. Additionally, as a grant partner with BCHD on Ending the HIV Epidemic community testing efforts, the CIDNI initiative provided all clients who received any available testing with a gift card incentive, as well as transportation assistance as needed. CIDNI also provided a Wi-Fi-enabled mobile van to ensure registration and documentation of immunization services in the electronic medical record.

The Johns Hopkins School of Nursing’s Vaccine Volunteer Program also identified and coordinated faculty, staff, and student volunteers for these co-located clinics. Specific preclinic training was collaboratively provided by Vaccine Volunteer Program, CIDNI, BCHD, and Mobile Vaccine Unit leaders, with topics covering population and sociocultural considerations, service offerings, obtaining informed consent, site
logistics, and safety. Volunteers participated in various roles, including assisting clients with registration forms and describing the services available to them, monitoring clients after vaccine administration, delivering pharmacist-prepared vaccine syringes restocking stations, and administering vaccines. Supervision was provided for students, allowing them to fully participate in all roles.

Lessons Learned

Relationship With the Community Was a Key Tenet of Success

In engaging this population, the BCHD SSP provides consistent needle exchange and harm reduction services to the community at set times and locations. This consistency and their respect for the community makes them a trusted health care provider in this population. Many clients made their initial contact for services through the SSP and were referred for services after receipt of harm reduction services. SSP staff routinely walked their clients to clinicians and staff, helping to address any questions and concerns regarding vaccination or communicable disease testing. Finally, their consistency allowed them to recognize their clients and ensure that those who received a two-dose vaccine series were connected to a second dose, even if they missed it at a subsequent time with our co-located clinic.

Clinicians On-Site Provided Essential Services

All partners in this effort provided licensed clinicians (medical doctors, nurse practitioners, and registered nurses) for various roles. All clinicians were experienced providers capable of meeting the anticipated and emergent needs of the population, including wound care, opioid reversal, and intranasal naloxone training to clients. On multiple occasions when the co-located clinics were held, clinicians responded to individuals on and around the site who had accidentally overdosed and required reversal. These individuals were asked to wait to ensure the reversal was not temporary. To date, no individual has required emergency medical services for higher level of care because of continued complications from an accidental overdose treated during a co-located clinic program. Additionally, the BCHD-affiliated clinician stationed in the postvaccination observation tent provided wound care to participants and received client referrals at other tents who required wound care and assessment. Finally, both at and after the clinic, clinicians provided linkage to care for individuals who tested positive for any of the testing provided.

Informed Consent Sometimes Required Additional Time

Staff from all partners received extensive training on consenting individuals for vaccination and HIV testing. The leadership, with input from experienced staff, recognized that some clients will seek services while under the influence of drugs and alcohol. Consent was assessed by ability to complete registration forms and interactions with staff. For those visibly intoxicated, clinicians conducted an additional assessment. Clients who were alert and oriented to time, place, and situation, could describe the risk and benefits of the vaccine and/or testing service they were about to receive, and reaffirmed their desire to receive the service were vaccinated and/or tested, then asked to wait in observation for an extended period of 30 minutes.

Incentives Go Beyond Money

Gift cards were offered to clients who received any of the point-of-care (HIV, hepatitis C, syphilis) or send-out (urogenital and pharyngeal GC/CT) tests. After having the opportunity to talk to staff at the testing tent about the benefits of vaccination, many individuals who received testing but initially refused vaccination later agreed to receive the vaccine. Given the potential for coercion, and because vaccines were still under Emergency Use Authorization by the Food and Drug Administration when this program was implemented, the leadership team decided against incentives for vaccination (The lessons learned presented in this article reflect co-located services offered from May 1, 2021, through August 21, 2021. During this time, the SARS-CoV-2 vaccine was still under Emergency Use Authorization). However, participants were provided drinks and snacks while under postvaccination observation. They were also offered the opportunity to receive a gift card with HIV and/or sexually transmitted infection (STI) testing and could access all the services provided by the SSP regardless of their decision to participate in vaccination.

Plan Early and Discuss After

Each time SARS-CoV-2 vaccinations were offered with SSP and HIV/STI testing services, leadership from each service team met at least 3 weeks before to discuss location and set up and coordinate plans. Agendas with actions items for each participating partner organization, including which materials and supplies would be provided, allowed for clear delegation of tasks. Members from each team also met with the SSP at each location for a walk-through and provided all staff and volunteers with a
Presence is a Present

Many clients of the SSP returned to the same location for services. For those who were hesitant at first, repeated engagement allowed individuals to gain trust and receive pertinent information about vaccination. Additionally, this co-located clinic did not refuse anyone who was eligible for a vaccine. During some clinics, “orphan” first doses (individuals who received their first dose but not the second) were identified and the series completed. Finally, consistency in presence propagated trust because those clients who received a vaccination then brought nearby friends and family to receive a vaccine and access on-site services.

Discussion

Co-location of health care services can increase access to infectious disease testing, vaccinations, and sterile syringes and can also improve linkages to infectious disease and substance use disorder treatment. SSPs also provide education on and access to naloxone, which is a critical intervention to prevent drug overdose deaths (Leece et al., 2013). These programs have proven successful because they “meet people where they are” by lowering many of the barriers that PWID face when in need of health care services. Unfortunately, widespread lockdowns in the United States during the COVID-19 pandemic have resulted in a decrease in services offered by SSPs, including testing for STIs, HIV, and hepatitis C virus (Glick et al., 2020). One North American Syringe Exchange Network study reported that 25% of SSP survey respondents had to close during the pandemic (Glick et al., 2020). These closures have occurred during record-breaking rates of overdose deaths in the United States, where 18 jurisdictions have reported an increase of more than 50% in the year, leading up to May 2020 (US Centers for Disease Control, 2020).

Despite these closures, however, some SSPs have expanded services to include COVID-19 screening and testing. For example, 27% of SSPs who responded to the North American Syringe Exchange Network survey reported screening for COVID-19 symptoms (Glick et al., 2020). SSPs are also reporting innovative workarounds to some of the challenges presented by the COVID-19 pandemic, including use of telemedicine to ensure continued access to medications for opioid use disorders (Wenger et al., 2021).

Syringe services programs are evidence-based programs that demonstrate how co-location of services can improve health care access for PWID. Maintaining and staffing SSPs for the duration of the pandemic should be prioritized to ensure continued access to care for these populations. With SSPs integrated into communities across the nation, a practical avenue is offered that increases COVID-19 vaccination rates in individuals who may inadvertently transmit COVID-19 and who have increased risk for COVID-19 infection-related morbidity and mortality. Additionally, SSPs and other programs that provide co-location of services reach populations in different ways—for example, some individuals may seek needle exchange, whereas others may use testing services—and thus may further increase uptake of COVID-19 vaccination and other critical services.

Moving forward, the organizations plan to continue co-located clinics to reach PWID who have not been vaccinated, as well as those who would benefit from booster doses, with a goal of bimonthly clinics. Members of each organization are committed to sustaining these services with existing funding streams, as well as applying for grant funding to support this work. This program brief provides an overview of how one urban health department has leveraged SSPs to address COVID-19 vaccine inequities in vulnerable populations, in the hopes that it may be useful for others developing similar programs. It is important that, many of the lessons learned from this program description could be applied to other community-based efforts that provide essential health services to hard-to-reach populations to help increase COVID-19 vaccination coverage.

Disclosures

The authors report no real or perceived vested interests related to this article that could be construed as a conflict of interest.

Author Contributions

All authors on this paper meet the four criteria for authorship as identified by the International Committee of Medical Journal Editors (ICMJE); all authors have contributed to the conception and design of the study, drafted or have been involved in revising this manuscript, reviewed the final version of this manuscript before submission, and agreed to be accountable for all aspects of the work. Specifically, using the CRediT taxonomy, the specific contributions of each author is as follows: Conceptualization & Methodology: O. Heidari, D. Meyer, K. J. O’Conor, V. Cargill, M. Patch, J.
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Key Considerations

- People who inject drugs remain a key population for low-barrier services, including for coronavirus disease 2019 vaccination.
- Co-locating essential services provides an opportunity to reach this population for targeted services.
- Trust in the community from an existing syringe service program allows for uptake of services offered, including vaccination or counseling for vaccine-hesitant individuals.
- Rapid testing for HIV and hepatitis C on site allows for linkage to care for treatment for new diagnoses and those previously lost to follow-up.

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