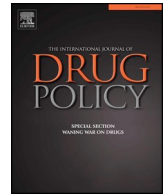




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Viewpoint

Drug use during a pandemic: Convergent risk of novel coronavirus and invasive bacterial and viral infections among people who use drugs

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The current coronavirus disease 2019 (COVID-19) pandemic has drastically changed the landscape of healthcare provision globally, with containment and treatment of the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) virus requiring substantial alterations to how healthcare is delivered. In some situations healthcare systems are struggling to meet the ongoing needs of the community, particularly for those who are among the most marginalized. In response to containment efforts, novel modes of healthcare delivery—such as telehealth for the evaluation and management of patients—have propagated rapidly (Lee, Kovarik, Tejasvi, Pizarro & Lipoff, 2020). While telehealth may be adequate for some clinical scenarios, healthcare delivery that traditionally relies on in-person interactions, including harm reduction services, will likely be severely hampered.

Quarantine and social distancing orders that restrict movement and gatherings (both public and private) will uniquely impact people who use drugs (PWUD). As a result of COVID-19, we can expect that PWUD will face greater barriers to accessing sterile needle-syringes, blood-borne virus (BBV) testing and treatment, and provision of advice on safer drug taking practice (Whitfield, Reed, Webster, & Hope, 2020). Reuse of injecting equipment (e.g., needle-syringes, washers, filters, water) increases the risk of acquiring invasive bacterial infections, including injection-site abscess, cellulitis, sepsis, infective endocarditis, and community-acquired pneumonia (Larney, Peacock, Mathers, Hickman & Degenhardt, 2017). COVID-19 disease severity among PWUD may be further compounded by co-occurring invasive bacterial infections, particularly community-acquired pneumonia and infective

endocarditis. For example, there is a plausible hypothesis that pulmonary embolisms caused by an injection-related infection may contribute to coagulation abnormalities seen in COVID-19 patients, although this is yet to be studied. Additionally, ongoing opioid and methamphetamine use may increase susceptibility to viral and bacterial infections through inhibition of immune functions (Roy et al., 2011; Salamanca, Sorrentino, Nosanchuk, & Martinez, 2014). While non-injecting practices (e.g., smoking, insufflation) may reduce the risk of bacterial infections and BBVs, contact with saliva and respiratory secretions on drug use equipment (Ti et al., 2011) may represent a risk of exposure to respiratory and other infections. It is possible that intranasal drug use may expose individuals to the SARS-CoV-2 virus similar to potential exposure to hepatitis C virus. Irrespective of route of administration, close physical contact involved in consuming drugs as a group activity may increase potential exposure.

As the COVID-19 pandemic progresses, we may expect that PWUD will have both greater risk of acquiring SARS-CoV-2 infection and more severe COVID-19 disease. Without adequate access to harm reduction interventions, PWUD are potentially at greater risk of acquiring BBVs and severe bacterial infections. Individual, social, and structural determinants of health (e.g., unstable housing, incarceration, poverty, drug criminalization) associated with increased risk for bacterial infections and BBVs will likely place PWUD at greater risk of COVID-19 disease and death. In many jurisdictions, chronically insufficient access to harm reduction services has already placed PWUD at greater risk of injection-related infections (Larney et al., 2017). If public health

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responses to COVID-19—such as social distancing and shelter-in-place orders—results in further limited access to these services, we may expect an increase in the reuse and sharing of injection and other drug consumption equipment, and thus potential for invasive bacterial infections and BBVs.

People living with HIV and/or viral hepatitis may be at risk of greater illness than the general population. Of great concern is evidence of increased liver disease among individuals with severe COVID-19 infection. (Jothimani, Venugopal, Abedin, Kaliamoorthy, & Rela, 2020) Review of published studies highlights moderate (2–11%) levels of underlying liver disease in patients with COVID-19, but substantial (14–53%) development of hepatitis dysfunction in this clinical population. People who use drugs that are living with HIV and/or viral hepatitis may be at greater risk of severe liver-related complications due to COVID-19 infection if affected by other structural and individual vulnerabilities. Clinical COVID-19 outcomes among people living with HIV are currently inconclusive with similar outcomes seen in the general population (Fung & Babik, 2020). As the public health response to COVID-19 evolves, policy makers and practitioners must ensure that individuals at risk of or currently living with BBVs and severe bacterial infections are provided adequate care and support.

We urge policy makers and practitioners to modify harm reduction services to address COVID-19 related changes. Harm reduction providers in the United States and United Kingdom report decreased availability of some services due to COVID-19, particularly for alcohol detoxification support, medications for opioid use disorder, and the management of blood borne and sexually transmitted infections (Glick et al., 2020; Public Health England, 2020). New ways to efficiently distribute supplies are necessary while also maintaining social distancing and protecting staff and clients. We urge harm reduction providers to implement needs-based distribution of drug use equipment (compared to one-for-one exchange), pre-packaging supplies, and secondary distribution through peer networks. Reducing restrictions on needle-syringe access is associated with more adequate coverage of injecting equipment (Bluthenthal et al., 2007). Meanwhile greater flexibility in the prescribing and dispensing of controlled drugs would facilitate access to medications for alcohol, opioid, and stimulant use disorders (Samuels et al., 2020). A rapid assessment of operation changes to harm reduction services in the United States revealed substantial restrictions on service delivery, including reduced HIV/HCV testing and alterations to operating hours. (Bartholomew, Nakamura, Metsch, & Tookes, 2020) All service providers in this study reported implementation of COVID-19 prevention measures and some reported transition to mobile service delivery. We urge policy makers and service providers to continue identifying novel and comprehensive procedures (e.g., secondary distribution of harm reduction equipment, safe drug supply, disinfectant materials for surface and hand hygiene) that serve service users, particularly ancillary services such as infectious disease testing.

During periods of restricted business activities, policy makers and legislative bodies must ensure that harm reduction services retain the capacity and authority to provide services that adequately meet the needs of PWUD. Additionally, public health messaging specific to PWUD is urgently needed, not only highlighting the need to self-isolate and sanitize commonly used equipment and surfaces in order to minimize the risk of SARS-CoV-2 transmission, but also on maintaining safe drug use practice and taking additional steps to avoid overdose with current uncertainties in the drug market and quality of supply (Karamouzian, Johnson & Kerr, 2020). Public health authorities have a duty to monitor the impact of the pandemic on COVID-19 specific and wider causes of morbidity and mortality in order to support recovery from this unprecedented event.

While substantial time, effort, and money is focused on responding to the COVID-19 pandemic, there is concern that PWUD will be forgotten in the response and lose access to essential harm reduction services, and opportunities that the pandemic response presents to engage with this population will be overlooked. We need to ensure that access to essential harm reduction services are not only maintained, but are widely supported and broadly expanded in this time of need.

Declaration of Competing Interests

None.

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