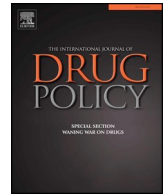




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Commentary

Safer opioid distribution in response to the COVID-19 pandemic

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ABSTRACT

COVID-19 has turned the world upside down in a very short period of time. The impact of COVID-19 will disproportionately effect people who are least able to protect themselves and this will include people who use drugs. The arrival of the COVID-19 pandemic comes at time when North America is in the midst of a protracted overdose epidemic caused by a toxic illegal drug supply. Overdose deaths are likely to rise when people are isolated, social support programs are cut back, and the illicit drug supply is further compromised. Safer opioid distribution in response to a toxic street drug supply is a pragmatic and effective way to reduce overdose deaths. COVID-19 makes such an approach even more urgent and compelling.

COVID-19 and people who use drugs

COVID-19 has turned the world upside down in a very short period of time. Without effective treatments or a vaccine, the primary approach to limiting the transmission of COVID-19 has been to reduce person-to-person contact. This has resulted in many communities locking down – people staying at home, businesses shutting down, schools closing, and social gatherings canceled. Modeling suggests that this has been an effective strategy with regards to reducing COVID-19 transmission (Kent, 2020), although the unintended social and economic consequences are massive and are still playing out (UNDP, 2020; Van Lancker & Parolin, 2020).

Like other natural disasters the people who suffer the most are those who are least able to protect themselves. COVID-19 has shown that pre-existing health and social inequality create huge vulnerabilities in certain communities (Abedi, Olulana, & Avula, 2020; Dorn, Cooney, & Sabin, 2020). This has played out directly with high death rates from COVID-19 infection, as well as indirectly through the interventions set up to control the spread. One group who are especially at risk are people who use drugs (PWUD). The impact of COVID-19 is expected to be severe in communities where illegal drug use is common due to the convergence of multiple factors (Volkow, 2020).

The actual environment that many people live in is not conducive to physical distancing. Scenes of tented encampments, emergency shelters, and people sleeping on the streets is one of the greatest challenges facing cities across North America. The need to address the homeless crisis has received a lot of media attention during the COVID-19 response (Fuller, 2020; Picard, 2020). Some see this as an opportunity to deal with two crises at once by opening up unoccupied hotel rooms (Osman, 2020). The use of drugs among those who are unhoused is

high, as chronic alcohol and drug use is tightly intertwined with homelessness (Doran et al., 2018). The emergency use of shelters is also problematic as crowding within a closed indoor space is set-up for COVID-19 transmission and is not a substitute for housing (Tobolowsky et al., 2020). Even if emergency housing can be found and mitigation strategies to reduce COVID-19 transmission are put in place, the need to access an illegal drug supply makes staying in place extremely unlikely (Bodkin, Mokashi, & Beal, 2020). It is not reasonable to expect that people who are dependent on drugs will stay in isolation (Jenkins, Bolinski, & Bresett, 2020) The drugs that they need are from illegal sources and the ways that people generate money to purchase drugs are generally not home based. Even for people on opioid agonist therapy (OAT), restrictive rules with regards to prescriptions and daily observed pick-ups makes physical distancing extremely challenging. Revising these restrictive regulations around OAT in response to COVID-19 must be a priority (Brico, 2020)

The prison system is also ill-equipped to deal with COVID-19 and many people who use drugs are in and out of the criminal justice system (Akiyama, Spaulding, & Rich, 2020). This sets up a continuous loop of new infections from those leaving prison who introduce COVID-19 into the community and those entering prison, who bring it back into the prison facilities. There have already been serious outbreaks of COVID-19 infection in correctional institutions like Rikers Island jail complex in New York, and this is likely to continue (Bryant, 2020). In addition to a range of prison mitigation strategies, some inmates have been discharged in order to reduce their chances of contracting the infection, but often with little attention to where they will go following discharge (BBC, 2020; Wurcel et al., 2020). While discharge from prison may help to reduce COVID-19 transmission, it should be recognized that this can be a hazardous event for people who have been forced to reduce or stop

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their opioid consumption. A waning tolerance to opioids means that the first exposure to street drugs can be deadly and it is critical that proper discharge planning and supports are in place (Bukten et al., 2017)

Many people who use drugs rely on public services for medical care, harm reduction supplies, street outreach, and food distribution. All of these critical supports have been disrupted by COVID-19 with either reduction in services or complete shutdowns (Khatri & Perrone, 2020). This includes restrictions to hospital emergency departments where many PWUD receive their primary medical care (Dunlop, Lokuge, & Masters, 2020). In fact, the messaging around overdose prevention is entirely opposite to what has been recommended in order to reduce COVID-19 exposure. For years we have been warning people about the risk of using drugs alone and now we are asking people to self-isolate and avoid unnecessary contact. Unless there are options to reduce the risk of overdosing when using alone – such as access to a safer drug supply – this will result in more deaths. In efforts to reduce contact, many supportive housing programs have restricted guests, and this again increases the likelihood that people will be using alone (St. Denis, 2020).

Another often overlooked impact of the COVID-19 pandemic is that the entire illegal drug market is disrupted and more unpredictable. A report by the Canadian Community Epidemiology Network on Drug Use highlights a number of converging issues that have made the illegal drug supply so unstable including disruption of the precursor supply chains, shut down of overseas synthesis facilities and disruption of drug shipping routes due to border closures (CCENDU, 2020). This creates further uncertainties in supply and the quality of the drugs being sold on the street deteriorates (Smith, 2020). These factors precipitated by COVID-19 will all combine to make the ongoing overdose epidemic even worse (Becker & Fiellin, 2020).

The overdose epidemic

There is no exact day or month or even year when the overdose epidemic started in North America. Drug overdose has always been a risk for people who relied on an unregulated street market for their drugs. However, beginning around 2012 the opioid drug market shifted in many communities. What had been a mixture of diverted pharmaceutical medications and imported heroin was replaced by fentanyl and other synthetic opioids (Scholl, Seth, Kariisa, Wilson, & Baldwin, 2018). The shift was gradual and uneven at first but by 2017 most street-based opioids in major cities across North America contained fentanyl or similar synthetic opioids (Colon-Berezin, Nolan, Blachman-Forshey, & Paone, 2019). Between 2016 and 2017 the Drug Enforcement Association reported a 5-fold increase in synthetic fentanyl seizures (Zibbell, Aldridge, Cauchon, DeFiore-Hyrmer, & Conway, 2019).

This shift to fentanyl and fentanyl analogues has proven to be deadly. The potency of these drugs is extremely high and there is very little room for error when mixing and producing them. People with long histories of opioid use have taken these very potent drugs and overdosed. In the Canadian province of British Columbia, where data is readily available, the number of illicit drug toxicity deaths went from 270 in 2012 to 1546 in 2018. Of note, in 2019 the number of deaths went down to 979 but monthly rates from 2020 show increasing trends returning. Over 80% of the toxicology reports show that fentanyl is responsible for the deaths (B.C. Coroner Service, 2020). In 2018, the Centers for Disease Control attributed over 33,000 overdose deaths to synthetic opioids (CDC, 2020).

The deeply entrenched stigma and indifference shown towards people who overdose is a major political and societal failing (Drug Policy Alliance, 2014). Deaths of this scale due to anything else would have demanded a response. The reasoning goes that there is really no justification or mechanism to regulate these drugs because they are illegal. So instead of viewing the overdose epidemic as a protracted mass poisoning event, it is viewed as a collection of self-inflicted harms or unintentional suicides. Based on this rationale,

people should know that these drugs can be lethal and it is their fault for using them. This victim blaming goes against everything that we know about addiction, trauma, and the structural barriers that perpetuate the epidemic.

While the response to the overdose crisis has been entirely inadequate, harm reduction interventions have played an important role in reducing overdose deaths. Harm reduction programs act as critical first steps to connecting with health and social services and provide a lifeline to treatment and other supports (Story et al., 2018). In British Columbia it was estimated through a modeling exercise, that the combined impact of naloxone, supervised injection sites and new starts on opioid agonist therapy (OAT) reduced overdose deaths by over 50% from April 2016 through to December 2017 (Irvine, Kuo, & Buxton, 2019). It is unfortunate that many jurisdictions across North America are still embroiled in debates that should have been settled long ago around the role of harm reduction and the merits of methadone programs, safe needle distribution, and supervised injection sites (Nadelmann & LaSalle, 2017).

Despite the important role that harm reduction programs play, the overdose epidemic has brought to light the limitations of existing interventions (Stone et al., 2018). While supervised injection sites and community-centered naloxone programs can save lives through intervening in overdoses once they occur, these interventions are not able to reduce the chances of overdosing in the first place nor do they reduce the harms, violence and interaction with policing that is associated with acquiring the drugs (Cooper, 2015).

Safer opioid distribution

The idea that people who are dependent on illegal drugs should be given access to a safer, regulated supply is both controversial and long overdue (Tyndall, 2018). It has become obvious to those who are most impacted by the overdose crisis that nothing short of providing access to safer opioid drugs will reduce overdoses (Fischer, Pang, & Tyndall, 2019). In fact, we have always known that people who acquire drugs through an illegal street market put themselves at great risk. From the international drug cartels to the street-based dealer, the motive to sell these drugs is profit driven and the well-being of the customers along with the quality and content of the drugs are secondary. This drive for profit has led to a tragic but predictable place where prohibition has filled the streets with fentanyl – cheap, concentrated, and highly addictive (Beletsky & Davis 2017). Fentanyl is the predictable outcome of opioid prohibition and the main victims are the people who are dying of overdoses.

From a purely pragmatic perspective it only makes sense to offer people a regulated and safer drug source. If drugs were regulated and accessible, then much of the violence and harms associated with drug acquisition through criminal sources would be eliminated. People would not be forced into desperate situations. From the person who collects discarded bottles, to those involved in low level drug dealing, to those involved in sex work, providing a regulated supply of drugs would reduce these activities and their risk. It would also greatly reduce the cost to the health care system and to the criminal justice system who are responsible for enforcing drug laws. On a global scale, the United Nations Office on Drugs and Crime (UNODC) estimates that the cost of enforcing current drug laws is in excess of \$100 billion per year (UNODC, 2012). Even more incredible than the cost to society is just how ineffective enforcement is in relation to reducing the trafficking and uptake of illegal drugs. Even re-distributing 10% of the resources from law enforcement to health and harm reduction, as called for by Harm Reduction International, could have a dramatic impact on the health and safety of PWUD (HRI, 2020).

A safer opioid supply is an especially difficult concept to promote when drugs are illegal and so much media attention has been given to the role of prescription opioids in the current overdose epidemic (Griesler, Hu, Wall, & Kandel, 2019). There are in fact a long list of

barriers that will make providing a safe drug supply difficult. While it is clear that the majority of overdoses are now due to fentanyl and other synthetic opioids, there is still a reluctance to prescribe pharmaceutical opioids because of the potential for overdose. There are also concerns around diversion of the prescribed medications as this could contribute to more people becoming dependent. Like many harm reduction programs, opposition will come from those who feel that all our efforts and resources should be put towards addiction treatment rather than harm reduction. There is also the cost of medications themselves and some will feel that it is not the responsibility of the taxpayer to pay for a safer opioid supply. Finally, the regulations around controlled drugs and substances are complex and any regulatory changes must pass through a large number of organizations and bureaucratic bodies including multiple levels of government, colleges of physicians, colleges of pharmacists, and law enforcement associations. Navigating through this bureaucracy can be a slow and arduous process.

Prior to COVID-19, the call to provide a safer opioid supply was gaining momentum. The theme of the Canadian National Day of Action on the Overdose Crisis on April 16, 2019 was "Safe Supply" (CAPUD, 2019). In a document produced by the Canadian Association of People who Use Drugs (CAPUD) the concept of a safe supply is described including what a safe supply means, how it can be dispensed, and models of successful programs. It also makes clear that a safe supply does not include methadone, buprenorphine/suboxone and slow release morphine as they are not intended to provide the mind/body altering properties that people are looking for. The question remained however around how to do this. How to provide a regulated supply of pharmaceutical-grade opioids that is accessible, scalable and will attract people who are most at risk of overdose (Ivsins, Boyd, Beletsky, & McNeil, 2020)?

The most recognized and researched form of a safe opioid supply is heroin assisted treatment (HAT) designed for chronic heroin dependent individuals. This is an evidenced-based response to people who have tried and failed other forms of addiction treatment (Ferri, Davoli, & Perucci, 2011). One of the larger clinical trials was conducted in Vancouver and Montreal and found that compared to standard methadone maintenance treatment, the provision of heroin was associated with better retention in care, reduced illicit drug use and less illegal activities (Oviedo-Joekes, Brissette, & Marsh, 2009). A subsequent study in Vancouver found that injectable hydromorphone produced similar positive outcomes when compared directly to heroin maintenance (Oviedo-Joekes, Guh, & Brissette, 2016). These clinical trials have resulted in the formation of a permanent clinic site to administer these protocols. Despite the positive outcomes, these programs have not been scaled up due to the costs of the facilities, the drugs, the security, the need for a highly skilled staff and political will. It is also designed specifically for people who have been refractory to other forms of treatment.

In response to COVID-19 there has been renewed interest around providing a safer drug supply to people who are required to isolate (Bach, Robinson, Sutherland, & Brar, 2020). The BC Centre for Substance Use released a set of prescription guidelines designed to support physicians who were willing to provide pharmaceutical-grade opioids to those who were diagnosed with COVID-19 or who were at risk of exposure (BCCSU, 2020). These guidelines included hydromorphone tablets or long-acting morphine (M-Eslon) capsules for opioid dependency, dextroamphetamine or methylphenidate for stimulant dependency and nicotine patches for nicotine dependency. The unique aspect of the safe supply guidelines is that the drugs can be consumed unwitnessed and that the length of the prescription is up to the prescribing physician. While an extremely important step in opening up the possibility of a safe supply, the uptake has been slow. One of the main barriers is the lack of physicians willing to prescribe and ultimately take on the responsibility and liability for the medications. Physicians are reluctant to act as the gate keepers for a public health response to the overdose crisis (Woo, 2020). It may indeed be necessary

to establish a regulated dispensing program that does not require individual physician prescribing, but rather a public health model whereby eligible participants are given direct access to a regulated supply of opioids. The participants could still be closely monitored but the goal would be to provide an alternative to the toxic street drug supply rather than embedding the program in a physician-led primary care model. This harm reduction approach would greatly reduce the risk of overdose, help break the cycle of poverty and despair, and increase the opportunity to engage in health care and social services.

Safer opioid distribution using technology

One way to provide a low-barrier, scalable, distribution model for a safer drug supply is through a technology that can dispense and monitor the medications. The MySafe machine is a biometric storage locker where people can pick-up their prescribed medications. This technology has been piloted in Vancouver, Canada since December 2019 (Turvill, 2020). MySafe is an 800-pound secure metal case, much like a large ATM, where medications can be dispensed using a non-touch biometric scanner. The biometrics reads the vein pattern of the palm and can only be used by the machine to identify the participant. Unlike fingerprints, for example, the biometrics is not linkable to any other identification systems and could not be used for surveillance. The main advantage of the biometrics, beyond security, is that it avoids the use of cards and PIN numbers that may be lost, forgotten or shared. It can be placed in a variety of locations including supervised injection sites, supportive housing buildings, pharmacies, or at a stand-alone location. Once enrolled in the program, the machine can deliver the prescribed medication in under 30 s and every transaction is tracked in real time. The MySafe machine is equipped with a video screen that can display messages to the participants and future modifications will include full telemedicine capabilities.

Initial observations with MySafe has identified a number of important advantages when providing a safer opioid supply. Firstly, the machine is entirely non-judgemental and provides people some autonomy when picking up their medications. This can be a big advantage over clinic-based or pharmacy-based programs where participants must follow more rigid protocols. Participants can still receive assistance and referrals, but this can happen through their own initiative. Secondly, pick-ups can happen over a 24-hour period and this provides maximum flexibility. Clinic and pharmacy-based programs often require participants to attend during specified times. Thirdly, the machine can be programmed to dispense medications on an individual schedule from multiple times per day to daily or even weekly. Some people who are using opioids may benefit from dispensing smaller quantities at each pick-up to be successful. Fourthly, there is real-time tracking for every transaction on a secure web-based dashboard that can be accessed by pharmacists and physicians. This essentially eliminates medication recording errors, tracks inventory and can send alerts if participants do not pick up doses. This is not used punitively but can add a level of safety if normal patterns of pick-ups are interrupted and some follow-up is required. The data collected on the machine is encrypted and kept on a secure server and follows security protocols that govern all medically sensitive information. Fifthly, the machine requires minimal staffing other than registering participants and loading the medications, so that it is cost-effective compared with programs that require person-to-person dispensing. Sixthly, the machine can dispense whatever medication is required. For the pilot program, hydromorphone tablets were used as they were legal, available, cheap and acceptable to a majority of opioid users. However, other formulations of opioids or even stimulant drugs could be dispensed as part of a safe supply program (Fleming, Barker, Ivsins, Vakharia, & McNeil, 2020). And finally, in an environment where physical distancing is required as an infection control measure during COVID-19, the machine allows quick pick-ups that avoids any line-ups and does not require any person-to-person contact.

Conclusion

The COVID-19 pandemic will have a major impact on the overdose crisis. Not only will COVID-19 contribute to even higher rates of drug overdoses, it will erode some of the progress that has been made to reduce overdose deaths. Drugs that were toxic have become more toxic, harm reduction interventions have been stalled, treatment programs have been reduced, many critical social services have contracted, and isolation has increased. Overall, the lives of PWUD have become even more precarious.

At the root of this response is stigma and indifference supported by global drug policies that are ineffective in curbing drug use and extremely destructive for people who use drugs (Coyne & Hall, 2017; Csete et al., 2016). While we advocate to reduce stigma, improve care and treatment, and change drug policy, we cannot simply wait as people continue to buy toxic street drugs. With any mass poisoning the urgent response would be provide non-toxic alternatives until a safer supply can be restored. With fentanyl on the streets, many people will not get a second chance. COVID-19 may not have changed the need for regulated and safer opioid distribution but it has made it much more compelling and urgent.

Declaration of Competing Interests

None.

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