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Public health responses to the opioid crisis in North America

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The opioid overdose epidemic in North America remains among the most challenging public health issues of recent times. Sadly, all evidence points to a worsening of the epidemic,^{1,2} despite growing investment in responses that span policy and legislative changes, scale-up of evidence-based overdose interventions, and the implementation and evaluation of novel interventions. This has prompted concerns about what is and what is not being done to address this epidemic that has resulted in reductions in life expectancy in both the United States and Canada.

Given the well-described problem of the over-prescribing of opioids for pain, governments and medical bodies have sought to reduce opioid prescribing through guideline development, physician education and monitoring efforts. While the rate of prescribing in US dropped from a high of 81.3 per 100 persons in 2012 to 58.5 per 100 persons in 2017,³ the death rate attributable to opioids continues to rise, and prescription opioid misuse has remained fairly stable since 2010.³ While this result may seem unexpected, it is not entirely surprising given observed transitions from prescription opioid to heroin use in the US, as well as evidence from Canada indicating that many individuals acquire heroin or diverted opioids from drug markets when denied opioids from physicians.⁴ These dynamics are consistent with evidence from a range of settings indicating that when access to one substance is restricted, most individuals will transition to using an alternative, which in many cases will be more dangerous than standardized doses of prescription opioids.

While many have attributed the overdose crisis to opioid prescribing, this is an obvious oversimplification of this epidemic. There is now clear evidence of an increasing role of illicitly manufactured opioids, such as fentanyl and related analogues, in the continued rise in overdose deaths. In the US, overdose deaths attributable to synthetic opioids accounted for approximately 59% of opioid overdose deaths in 2017,¹ while in Canada the proportion of deaths attributed to fentanyl or related analogues increased from 55% in 2016 to 73% in 2017.⁵ One recent response has been the implementation of drug checking technologies

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(DCTs), including easy to use test strips and more complex and expensive mass spectrometry machinery. DTCs have been implemented to promote the testing of drugs for contaminants prior to use. The aim is to promote the adoption of harm reduction practices, such as dose reduction or drug disposal, when drugs are found to contain fentanyl or related analogues. DCTs have traditionally be applied in the context of dance or “rave” settings, but have increasingly been offered to individuals outside who use opioids or stimulants such as cocaine. Unfortunately, the uptake of DCTs among individuals at high risk for overdose has so far been very low (< 2%) in some settings,⁶ and many individuals report actively seeking fentanyl. While DCTs may aid efforts to monitor the drug supply, the extent to which they dissuade individuals from using substances containing fentanyl and other contaminants remains unclear.

Considerable effort has also been made to scale up opioid agonist treatments (OAT), including methadone and buprenorphine. However, given the well-noted challenges in attracting and retaining individuals in these treatments, the range of options has increased, including newer oral approaches such as slow-release morphine. In Canada, injectable opioid treatments have been introduced, including diacetylmorphine and hydromorphone, and while such programs have been found to be highly successful for those who have not benefited from more traditional OAT approaches,⁷ access to these newer treatments remains unacceptably low and efforts are needed to bring these programs to an appropriate scale.

Given that the overdose epidemic has increasingly been driven by more potent and toxic illicit drugs, there have also been calls for a more a public health approach to replacing the drug supply through the low threshold provision of inexpensive and legal opioid alternatives, such as hydromorphone, including through supervised injection facilities and even vending machines. However, concerns, which remain under-evaluated, about safety, diversion, and the need to emphasize treatment over harm reduction, have so far presented considerable barriers to the implementation of these approaches. Still, growing calls for a “safe supply” approach have emphasized a very real need to displace the existing toxic drug supply by providing access to safer opioids outside of treatment settings. Indeed, even comprehensive systems of substance use treatment fail to engage most individuals who use drugs, rates of relapse following treatment remain high, and many people who use use drugs have no interest in seeking treatment and see little value in doing so. Accordingly, there is a need for more harm reduction focused approaches to ensuring a safer supply of drugs to those who remain at risk for overdose. This form of structural intervention is not without its complexities, and could require legislative or policy change, but is an approach that is gaining momentum in some settings and should be further implemented and evaluated.

The overdose-reversing drug naloxone has also been made increasingly accessible in recent years, and the Canadian government has made the drug available without a prescription. Although access remains more restricted in the US, the distribution of naloxone has still increased eight-fold there from 2015–2017.⁸ While the distribution of naloxone has undoubtedly resulted in lives saved, evidence from the US suggests that inconsistent possession of naloxone may now be a major problem, with one study finding that only 26% of individuals who received naloxone kits and training reported carrying naloxone all the time.⁹

Some innovative but controversial interventions have also been implemented and well evaluated. For example, supervised injection sites (SIS), where individuals can inject under the supervision of healthcare professionals or peers have been implemented throughout Canada,¹⁰ and while they have been shown to reduce overdose mortality their coverage remains low. Further, despite considerable interest in SIS in various US states, no sanctioned SIS exist in the country, and government officials have repeatedly misrepresented scientific evidence to discourage their establishment. For example, although over 40 peer-reviewed studies, including two systematic reviews, document the benefits and lack of negative impacts of SIS,¹⁰ Deputy Attorney General Rod Rosenstein said SIS “are very dangerous and would only make the opioid crisis worse”.¹¹ More recently in Canada, the supervision of drug consumption has been expanded to housing settings and hospitals, and novel peer-witnessed injecting programs have been established. The expansion of these interventions to housing settings in Canada is clearly needed given evidence indicating that a majority of overdoses in occur among individuals consuming drugs alone in their homes.²

A growing body of literature highlights the potential of cannabis to reduce opioid use and opioid overdose. Available evidence suggests that many individuals will substitute cannabis for illicit opioids and prescription opioids, and greater access to medicinal cannabis has been associated with reductions in overdose deaths.¹² In Vancouver, Canada, cannabis distribution projects are now being implemented at the community level as overdose prevention interventions, and related evaluation work is now underway. While cannabis was recently legalized in Canada, legislative reform is likely needed in most settings to allow for clinical and observational research on this topic.

While much has been done to address the opioid overdose epidemic it may be time to consider whether the current response has been overmedicalized. A growing body of literature points to the potent role of social and structural drivers in shaping not only opioid use and overdose, but also an array of other health challenges, including rising rates of mental health problems, suicide, and alcoholism.¹³ Common social-structural drivers of these conditions include socio-economic disadvantage, such as increasing income disparity, and related social despair and hopelessness,¹³ as was elucidated in a recent analysis demonstrating that US states with lowest social capital had the highest rate of overdose death.¹⁴ Accordingly, it is time to think beyond conventional medical approaches and develop strategies to ensure income security, access to employment and stable housing as a means to reducing overdose death. Further, racial disparity and marginalization also continue to drive death due to overdose.¹³ In both the US and Canada individuals of Indigenous ancestry have been disproportionately affected by the overdose crisis, pointing to the need for reconciliation, and the development of culturally appropriate policies and programming.

The stigma associated with drug use and treatment seeking also continue to undermine virtually all responses to the current overdose crisis. Efforts are therefore needed to address such stigma, and individuals with lived experience with substance use are well-positioned to not only reach individuals marginalized from mainstream support and care, but also to assist in the development of stigma-reducing interventions. However, the involvement of people who use drugs in the development of overdose responses has not been adequately supported.

Lastly, there is overwhelming evidence demonstrating that much preventable drug-related harm is driven by the criminalization and incarceration of people who use drugs. Fortunately, a growing number of countries are experimenting with alternative approaches, including the decriminalization, legalization and regulation of drugs, and such structural change should be encouraged throughout North America.

The opioid overdose epidemic remains the most urgent public health crisis in North America. While much has been done in effort to reduce deaths due to opioid use, little progress has been made, which necessitates a more critical analysis of existing efforts, the continued implementation of novel approaches, and a move away from over-medicalizing the epidemic and towards considering ways of addressing the upstream social-structural drivers of opioid overdose, including those rooted in social-economic changes, racial disparity, and criminalization. However, as has been pointed out eloquently by Dasgupta et al., there is no “easy fix” to such problems.¹³ Still, until a broader approach is taken it is unclear whether real change in opioid overdose dynamics can be reasonably expected.

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