SASKATCHEWAN POPULATION HEALTH AND EVALUATION RESEARCH UNIT

Evidence-Informed Responses to Evolving Opioid-Related Harms in the Province of Saskatchewan

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Lead Author[1]: Gabriela Novotna, Ph.D.

Co-Authors: Cheryl Camillo, Ph.D., Elizabeth Cooper, Ph.D., Tom McIntosh, Ph.D., and Michelle Stewart, Ph.D.

[1] The authors are all members of the Saskatchewan Population Health and Evaluation Research Unit [SPHERU] and hold academic appointments in various faculties at the University of Regina; the co-authors are listed in alphabetical order.

This discussion paper was prepared for the Saskatchewan Drug Task Force (DTF) to address the ongoing public health crisis related to opioid-involved overdoses and deaths[2] in the province. The purpose of the paper is to outline opportunities for reducing the occurrence of overdoses and preventing overdose-related harms, including deaths in Saskatchewan. Considering pertinent environmental and demographic factors, it argues strongly for an evidence-informed, broad-based and community-driven approach to harm reduction in the province.

INTRODUCTION

In recent years, Canada's leading cause of opioid-related mortality has changed from prescription pharmaceutical opioids and their subsequent diversion to the community to toxic illicit synthetic opioids. The corrective measures towards the regulation of pain management (Busse et al., 2017), although needed, were met with the increased supply of illegal drug markets by highly toxic illicit/synthetic opioids such as fentanyl and its analogues (Fischer et al., 2020; Fischer et al., 2016; Tyndall, 2018).

In addition to the changes in drug supply, the inadequate access to evidence-informed addiction interventions and broader societal attitudes and stigma (Basky, 2019) have contributed to an opioid crisis of historical proportions; in 2017, opioid-involved deaths reduced life expectancy at birth by 0.07 years (Canadian Centre for Substance Use and Addiction, [CCSA] 2021; Statistics Canada). Historically, the high hospitalization rates attributable to primarily prescription opioids were among older adults (65+); over the last ten years, hospitalizations due to opioid toxicity have been reported mainly among youth aged 15 and 24 and adults aged 25 to 44 (O'Connor et al., 2018).

OPIOID-RELATED DEATHS DURING THE COVID-19 PANDEMIC

The COVID-19 pandemic has worsened the already deadly public health crisis of opioid overdoses. The pandemic disrupted the provision of health services, counselling and mental health supports (Muhajarine et al., 2021) when individuals were under increased social and economic stress due to policies necessary to control the pandemic. It is no surprise then that opioid toxicity deaths rose during this time.

[2] In keeping with evidence-based practices in the area of harm reduction, this discussion paper will use the terms such as “overdose” and “poisoning” with the understanding that these terms carry with them the potential for stigmatization which can lead to individuals being blamed versus responsive public policy during a crisis (see for example: Collins, A. B., Bluthenthal, R. N., Boyd, J., & McNeil, R. (2018). Harnessing the language of overdose prevention to advance evidence-based responses to the opioid crisis. *International Journal of Drug Policy*, *55*, 77-79.)

Since April 2020 -- shortly after the onset of the pandemic in Canada -- and March 2021, there have been 6,946 apparent opioid toxicity deaths [AOTD][3] in this country[4], an 88% increase from the equivalent pre-pandemic period (3,691 deaths between April 2019 and March 2020). According to Public Health Canada (PHAC], approximately 20 AOTDs per day (1,772 in total) occurred between January and March 2021. Even during the pandemic, hospitals reported almost 6,000 opioid-related poisoning hospitalizations between April 2020 and March 2021, representing a 27% increase from the pre-pandemic numbers.

Fentanyl and fentanyl analogues were involved in 87% of accidental AOTDs between January and March 2021, and 90% involved a non-pharmaceutical opioid. During the same period, males aged 20-49 accounted for three-quarters of accidental AOTDs (Special Advisory Committee on the Epidemic of Opioid Overdoses, 2021).

SASKATCHEWAN CONTEXT

Although more than 85% of all opioid toxicity deaths and 90% opioid-poisoning hospitalizations in 2020 in Canada occurred in British Columbia, Alberta and Ontario, the provinces that represent half of the Canadian population (Special Advisory Committee on the Epidemic of Opioid Overdoses, 2021), Saskatchewan has not been spared from excessive death due to the opioids and polydrug use. Saskatchewan Coroners Service (September 2021) reported 303 confirmed drug toxicity deaths in 2020, an almost 300% increase from 2010. Between January 2021 and September 2021, there were 102 confirmed and 167 suspected drug toxicity deaths, with two-thirds of deaths related to fentanyl (SK Coroners Service, September 2021).

The opioid-related deaths have dominated public discussions due to their unprecedented health and social burden on society. Another factor that adds to the complexity of drug-related mortality in Saskatchewan and other prairie provinces is psychostimulants (cocaine, crack/cocaine, methamphetamines). The Saskatchewan Coroners Services report (September 2021) indicates that between 2014 and 2020, confirmed deaths related to combined drug toxicity (methamphetamine as one of the drugs) increased more than 110% (from 3 to 113 deaths).

[3] Apparent opioid toxicity death (AOTD): A death caused by intoxication/toxicity (poisoning) resulting from substance use, where one or more of the substances is an opioid, regardless of how it was obtained (e.g. illegally or through personal prescription). Other substances may also be involved (PHAC, 2021).

[4] PHAC data provide information from six provinces and territories (except Manitoba)

The implications of the changes in supply of illicit drugs and their availability are most profound among vulnerable, street-involved groups; this increase in stimulant consumption represents a "twin" or silent epidemic that warrants attention (Ciccarone, 2021; Jones et al., 2020; Fischer et al., 2021).

AT-RISK POPULATIONS

There are certain groups of people who are at higher risk for opioid use. A one-size-fits-most approach does not work for addressing harms caused by substance use. People who use substances alone are at higher risk for overdose, people who are long-term users are at higher risks for death related to chronic use. Deaths related to long-term use are not counted in the opioid mortality statistics.

The reasons for use differ, and the approach used to address risk factors must be taken into consideration. Indigenous peoples are over-represented within the mortality statistics. Reconciliation efforts and acknowledgement of the role colonialism plays in health inequities must be addressed to curb drug use (Lavalley, 2018). Those who have been involved in the criminal justice system, including those who are in the process of reintegration into their communities, are at risk for additional challenges with problematic substance use and the combined stigmatization of involvement with corrections (Canadian Centre on Substance Use and Addiction, 2017a).

The opioid crisis disproportionately appears in the trades, with over 19,000 deaths within Canada during the past five years. Organizational culture, risk of injuries, stress, and stigma have meant that many do not identify their risks or seek assistance (Wall, 2021). In general, young males under the age of 39 are at higher risk of opioid-involved deaths. In addition to people in the trades, this age group often includes street-involved youth and street entrenched adult drug users and recreational drug users, as well as those who are event-specific users, such as weekend use at parties (Canadian Centre on Substance Use and Addiction, 2017b; Carriere, Sanmartin & Garner, 2021). While statistics are not readily available, it is reasonable to assume that this is a key demographic to consider within Saskatchewan as well.

EVIDENCE-INFORMED RESPONSES TO THE OPIOID-RELATED HARMS

The almost two-decades-long opioid crisis in Canada has been addressed by a mix of unevenly implemented interventions that have been primarily reactive and with individually oriented medical (reversing overdoses with opioid antagonists) and criminal justice interventions (The Good Samaritan Law) rather than considering the wraparound services for the whole communities and populations (Fischer et al., 2020). The interventions usually involve opioid

agonist therapy with methadone or buprenorphine/naloxone and supervised drug consumption sites to reduce fatal outcomes of overdose and naloxone distribution for overdose rehearsal. Despite the best efforts of grassroots organizations and agencies, these services often struggle with funding and face public rejection and lack of political will to scale up their interventions.

Extant research suggests that effective responses to opioid-related deaths and harms need to be addressed across the continuum of care. Rather than heavily relying on one approach to recovery (e.i. abstinence-based models), a range of services, such as screening/assessment, community outreach, harm reduction and both pharmacological and psychosocial interventions are most effective at sustaining wellness and the quality of life when readily available and tailored to the complex needs of individuals who use opioids (Taha, 2018). For example, the benefits of the continuum of care model for individuals who use drugs intravenously has been demonstrated at both individual and community level. Needle exchange programs and opioid agonist treatment options improve health-related outcomes for individuals who use drugs and reduce healthcare costs associated with hospitalizations and mortality due to IDU-related complications (Tsybina et al., 2021).

FRAMING THE ISSUE OF EXCESSIVE OPIOID-INVOLVED OVERDOSES AND DEATHS AS A PUBLIC HEALTH CRISIS AND SOCIAL JUSTICE/EQUITY ISSUE

Excessive opioid-related mortality in Saskatchewan needs to be addressed from public health and social justice perspectives that employ the concept of harm reduction. While often thought of as needle exchange or safe injection sites, a harm reduction approach entails much more. Prohibition and abstinence do not work as an all-encompassing approach for every person. There needs to be a continuum of care where people and their changing needs can be met (Gomes & Vecchia, 2018), and there is recognition that specific behaviours and activities may continue to exist (Harm Reduction Coalition, 2017).

People with lived and living experience of drug use must be part of the decision making process when it comes to determining programming and policy decisions to ensure that they are relevant and that social and societal responses are included in response to substance use (Gill, 2006; Kolla, 2018; Nielsen & Dwhurst, 2006). Only by involving communities impacted by the opioid crisis can we ensure that policies and programming meet the current climate of those most affected by risk behaviours. Consistent efforts must be made to ensure that harms are not minimized or ignored, but rather that people are supported where they are at, and the safe choice becomes the easy choice (Harm Reduction Coalition, 2017).

Focusing on a continuum of care model ensures that there are wrap-around services for those who use illicit substances. Wrap around services often include social, and education supports, as

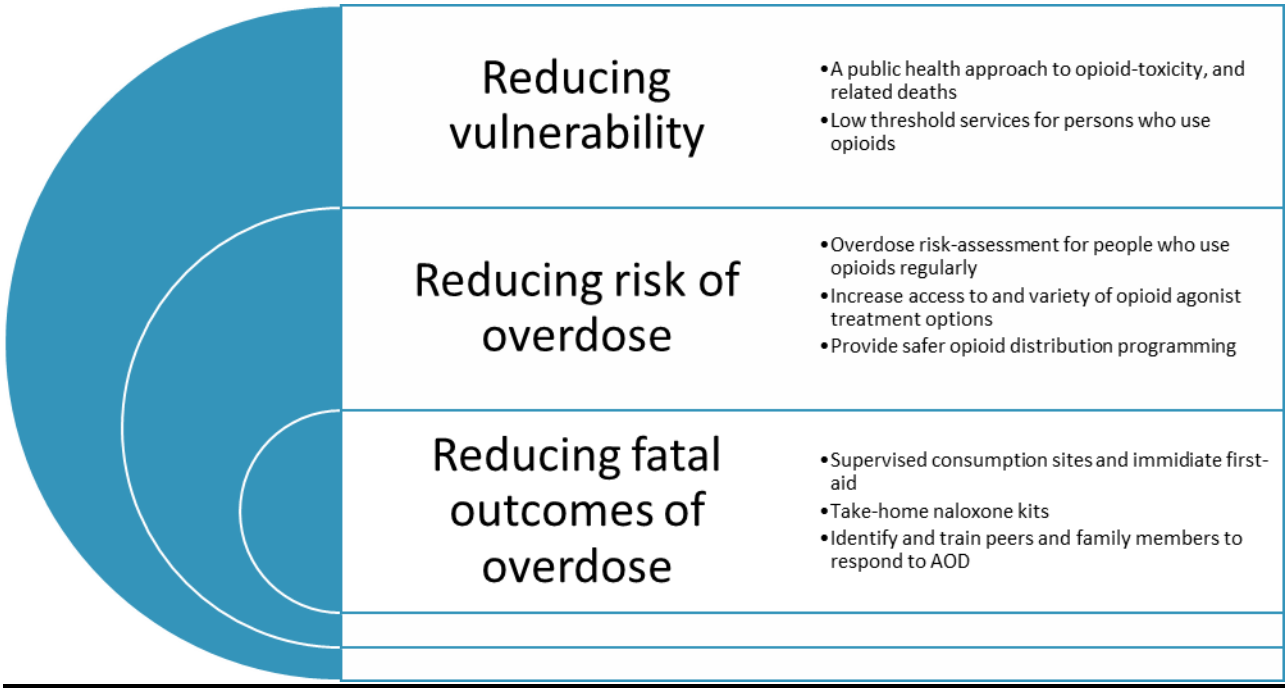
well as health supports that focus beyond a single outcome to what is needed for overall health of an individual, their community, and their support networks, both formal and informal. This approach has been shown to intervene in overdose events as well as improve the overarching health and wellbeing of people who use drugs (Kolla, 2018).

Interventions to reduce opioid-related deaths and mortality from polydrug use need to be applied as a comprehensive strategy that addresses specific populations at different levels of vulnerability to opioid toxicity and opioid-involved overdose deaths (Alho et al., 2020; EMCDDA, 2017).

THREE PILLARS OF INTERVENTIONS/STRATEGIES:

Many countries and jurisdictions recognize that the unique needs of different populations and communities require considering both immediate and long-term strategies to address both ongoing and emerging harms related to opioid toxicity (EMCDDA, 2017). Due to the complex and interrelated factors that contribute to harms associated with opioid toxicity, it is recommended that both risk and protective factors at both individual and community levels are considered. To demonstrate the need for a comprehensive approach to the opioid toxicity crisis, we suggest focusing on prevention of opioids overdose deaths at three levels/pillars (Figure 1).

Figure 1:



1. **To reduce the vulnerability of individuals to opioid toxicity and opioid-involved deaths, the following measures should be considered:**
   a. Tailored prevention, education and information sharing with the general public as well as specific populations about the opioid toxicity and risk of overdose or death:
      - Young males in the trades, transportation and construction industries were identified as at-risk populations for opioid-involved overdose and deaths (CCSA, 2017). We recommend that Saskatchewan-based employers in these industries start utilizing the evidence-informed ToolKit to address stigma related to opioid use, educate about the risks of overdose and present ready-to-use resources for employees (Available at https://www.ccsa.ca/substance-use-and-workplace-supporting-employers-and-employees-trades-toolkit)
      - Individuals involved in high-risk, long-term chronic use of opioids need access to low threshold services that would address their immediate needs. These include safer needle exchange programs with expanded hours and days of operations that provide more supports.
      - Individuals involved in the justice system should have access to treatment for opioid use disorders, whether through continuation or initiation of opioid agonist therapy, be educated about the risk of opioid toxicity, and have access to Naloxone.

2. **To reduce the risk of opioid-involved overdose, the following measures are recommended:**
   a. Prevention of the exposure to contaminated, illicit opioids:
      - Interventions/assessment to identify persons' increased risk of overdose and provide drug testing in safer drug consumption rooms.
      - Establish a "safer opioid distribution" program as a public health intervention addressing opioid toxicity in the community through the availability of injectable opioid pharmaceutical treatments such as diacetylmorphine or hydromorphone (Fischer et al., 2020). Expanding opioid interventions for individuals with chronic and severe opioid use through access to high-grade injectable opioids during the COVID - 19 public health social distancing prevented deaths from highly contaminated illicit opioid supply (Canadian Centre on Substance Use and Addiction, June 2020). Injection opioid agonist treatment is considered a "last resort" treatment for individuals who meet the criteria, such as intravenous drug use, be at risk for overdose and have a history of unsuccessful oral opioid agonist treatment.
   b. Increase of the availability and range of opioid agonist recovery interventions. WHO has called medication-assisted opioid treatment one of the most effective type of opioid treatment/ interventions.

- Expand Opioid Agonist Treatment [AOT] to Buprenorphine/Naloxone (Suboxone), Methadone, Slow-release oral Morphine (SROM) in larger cities and the north. Opioid Agonist Treatment reduces the risk of mortality substantially, and the retention in a drug treatment program is a protective factor against overdose and death. Increased availability of and access to AOT needs to be accompanied by the increased public awareness of its effectiveness by the government and local leadership. This will help reduce stigma associated with AOT that discourages people from seeking this form of treatment.
- Develop strategies for training, peer mentoring of more physicians in opioid agonist prescription regimes; address the general practitioners' resistance; consider stabilizing patients first in addiction-specific clinics before transferring them to primary care (Basky, 2019).

3. **To reduce fatal outcomes of overdose, we recommend scaling up the strategies for the opioid overdose reversal, namely:**
    - Access to supervised drug consumption rooms and immediate first-aid.
    - Ubiquitous and Low-Barrier access to Naloxone training and kits. WHO Guidelines on Community Management of Opioid Overdose (2014) strongly recommend using targeted Naloxone distribution to reverse opioid overdose. People who are likely to witness an opioid overdose should have access to Naloxone and be trained to administer it.
    - Know the Signs (Public Education and Outreach), such as publications from the Government of Canada (https://www.canada.ca/en/health-canada/services/publications/healthy-living/opioid-overdose-poster-for-communities.html

Key to the success of these interventions is the active engagement of and partnership with those communities at risk and those with lived experience. This is essential to ensure that interventions meet the specific needs of different populations in different contexts and that supports exists across a continuum of care. Designing and implementing interventions 'from the ground up' and with the active participation of the community being served is an essential element of increasing uptake, securing community support (legitimacy) and meeting the needs of those being served. It also provides a means to better understand best practices (what works in what context for which community) and creates better opportunities to transfer/adapt those practices to similar settings. This is admittedly a more time-consuming and complex process of policy design and implementation than a single province-wide approach, but it is also far more likely to have a greater impact on reducing opioid use and saving lives.

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About SPHERU

The Saskatchewan Population Health and Evaluation Research Unit (SPHERU) is a bi-university research centre located at both the University of Regina and the University of Saskatchewan. Established in 2000, SPHERU's mandate is to engage in interdisciplinary, community-based population health intervention research aimed at reducing health inequities across various populations in the province, including, but not limited to, those created by race, age, geography and socio-economic status. Its work is focused on children's health, rural health, Northern and Indigenous Health and the history of health inequality in the province and in recent years has also pursued a particular focus on senior's health and international maternal health.

The full history of SPHERU's research can be found at www.spheru.ca and on a special 20th anniversary website www.spheru20.ca that combines videos, animation, and testimonials to illustrate how SPHERU's two decades of collaboration and cross-sector partnerships bridged gaps between disciplines, organizations, and communities. SPHERU has catalyzed transformations through innovative research methods, engagement, knowledge creation, and intervention. Its researchers work directly with Saskatchewan communities, organizations, and community partners to make a real difference in the health of Saskatchewan people.