CIHR IRSC Canadian Institutes of Health Research Instituts de recherche en santé du Canada

What We Heard: End-of-Grant Knowledge Exchange Workshop Report

Evaluation of Interventions to Address the Opioid Crisis

Dates: October 22 and 29, 2020

Canadian Institutes of Health Research

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Introduction

On Oct. 22 and 29, 2020, the Canadian Institutes of Health Research (CIHR) hosted an online end-of-grant Knowledge Exchange Workshop for projects funded through the *Evaluation of Interventions to Address the Opioid Crisis* funding opportunity. In total, 15 research teams were funded through this competition and each team was required to include at least one knowledge user in their projects.

This report comprises a synthesis of the evidence presented by 14 research teams, a summary of knowledge user and stakeholder perspectives that were shared, and highlights from the discussions that followed.

DISCLAIMER

The following information is intended to summarize what we heard at the workshop. CIHR has made every effort to share this text with project participants and workshop panelists for their review, therefore any errors or omissions are unintentional. This report should not be taken as a definitive account of research results and readers are advised to follow up directly with grant recipients for the most current information on their projects.

The meeting book for this workshop is available to the public upon request. Requests can be directed to the CIHR Contact Centre: *support-soutien@cihr-irsc.gc.ca*

Workshop Objectives

The primary objectives of the workshop were to:

- facilitate the exchange of knowledge generated through the evaluations of intervention projects intended to address the opioid crisis and related evidence to knowledge users;
- further the dialogue between the research community, policy makers, health care providers and other relevant stakeholders to explore how this evidence may inform ongoing and future development of interventions related to the opioid crisis; and
- increase the application of knowledge in health care and/or health services policy and practice to address the most urgent elements of the opioid crisis, including opioid-related mortality rates.

Message from CIHR Institute of Neurosciences, Mental Health and Addiction

Dr. Samuel Weiss, Scientific Director, CIHR-INMHA

Canada is facing a national opioid crisis, which has been further exacerbated by the COVID-19 pandemic. The Minister of Health has made addressing the national opioid crisis a top priority, committing to protecting the health and safety of all Canadians through a comprehensive, collaborative, compassionate and evidence-based approach to preventing and reducing substance-related harms.

Under the *Canadian Drugs and Substances Strategy*, the *Canadian Institutes of Health Research* (CIHR) is contributing to national efforts to address the opioid crisis by supporting the creation and mobilization of knowledge needed to help inform our responses to the opioid crisis. The 14 grants that were discussed over the course of this two-day, end-of-grant virtual workshop support evaluation projects to rapidly assess interventions and practices that have been put in place to address the most urgent elements of the opioid crisis. These projects have also considered sub-populations and biological and social determinants of substance-related harms, and were designed to use an integrated research approach that directly involves a principal knowledge user to enable maximum impact and uptake of the findings.

The growing number of opioid-related overdoses and deaths across Canada underscores the importance of research of this nature. These findings provide timely evidence on the efficacy of prevention (including pain management), harm reduction and treatment interventions. This new knowledge will help practitioners and decision makers within the health system make informed decisions to help prevent and reduce substance-related harms. I am encouraged by the progress and commitment of the Canadian research community, and stakeholders across the country, as we all work together to support an evidence-based approach to address the opioid crisis.

Thank you to the researchers, knowledge users, stakeholders and colleagues for participating in this important knowledge exchange event.

Samuel Weiss, PhD, FRSC, FCAHS
Scientific Director, CIHR Institute of Neurosciences, Mental Health and Addiction

Session 1: Pain

This session included five research presentations, a knowledge user panel and discussion addressing pain in the context of the opioid crisis.

AN INTEGRATED INTERDISCIPLINARY PRIMARY CARE APPROACH TO THE USE AND MISUSE OF OPIOIDS IN CHRONIC PAIN: A FEASIBILITY AND PRELIMINARY EFFICACY STUDY

Presented by: Sara Ahmed; Regina Visca

This study evaluated the Integrated Model of Care for Active Coping (PAC) program. The PAC program includes baseline evaluation, health education/behaviour change, self-treatment plans to stop pain catastrophizing and pharmacist-led intervention to assure appropriate use of pain medications. Outcomes being evaluated by this study include pain catastrophizing and opioids dispensed, and basic qualities of health and well-being, including sleep as reported by patients.

The program was perceived positively by the Quebec Ministry of Health and has been integrated into the provincial strategic plan. Hiring issues, exacerbated by the COVID-19 pandemic, are a current challenge, as are competing priorities across the numerous partners.

This program is guided by the principles of value-added care, balanced impact on population health, health care costs, provider experience and patient experience. It follows a stepped-care approach comprising individuals, teams, community, organizations and policy. The program provides knowledge about the needs and motivations at each level, recognizes dynamic interrelatedness and fosters connectedness.

EVALUATING THE OUTCOMES AND EXPERIENCES OF CHRONIC PAIN SELF-MANAGEMENT SUPPORT WITH AN OPIOID DE-PRESCRIBING INTERVENTION: A MIXED METHODS STUDY

Presented by: Jordan Miller; Kieran Moore

This study evaluated self-management supports and an opioid de-prescribing intervention to decrease opioid use in chronic pain patients. The study took place within three settings: urban academic, rural community and family health without a multidisciplinary team. Both qualitative (survey) and quantitative (electronic medical records) data were collected. The program included trauma-informed care training for physicians speaking with patients around deprescribing opioids. The study reported a small sample size (n=24), as well as various challenges with participation/enrollment in the program across the three sites.

The study found a 20% decrease in opioid dose and a 25% decrease in pain interference (the extent to which pain hinders engagement in activities and enjoyment in life) over time across all sites. A greater reduction in opioid dose was observed in sites that had multidisciplinary teams in place. Sites without existing teams experienced more challenges. Those that were able to participate fully had better outcomes, and individuals who were on a higher dose of opioids at the start of the study were less likely to complete the program. Self-management was found to decrease pain interference.

Including a patient knowledge user in the study helped to capture patients' experiences. Participants reported feeling supported and found combined intervention to be beneficial. It was noted that the context influenced implementation and there were many factors contributing to differences between sites.

A multidisciplinary approach is effective in pain management and supporting opioid reductions but is difficult to access. Supporting self-management and de-prescribing is not as simple as bringing in experts. High-functioning multidisciplinary teams are fundamental, but need to overcome barriers, including planning, processes for interprofessional collaboration, coordination of care, preparing patients and providers for deprescribing and change management.

EVALUATION OF PROJECT ECHO CHRONIC PAIN AND OPIOID STEWARDSHIP IN ONTARIO: IMPACT ON PRIMARY CARE PRACTITIONERS' SELF-EFFICACY, KNOWLEDGE, AND PRESCRIBING BEHAVIOURS

Presented by: Patricia Poulin; Lynn Cooper

This study evaluated Project ECHO, an interprofessional and continuing professional development program aimed at improving health care provider knowledge of chronic pain and pain management practice. Project ECHO has trained more than 800 providers, including doctors, nurse practitioners and pharmacists, through daytime and evening sessions.

It was noted that significantly more prescribers attended the evening sessions. Common barriers to attending the ECHO sessions were related to work demands that took priority. The study found a significant improvement in self-efficacy amongst participants, but provider knowledge from pre- to post-ECHO did not increase significantly. Data on whether there was a change in prescribing practices following ECHO sessions are forthcoming, though foundational work suggests that participation in the program is associated with a reduction in high-dose opioid prescribing.

The researchers noted that participants in Project ECHO had a higher proportion of patients on high doses of opioids compared to matched controls.

The observed improvements in chronic pain management self-efficacy demonstrate preliminary effectiveness of a three-session series focusing on topics relevant to prescribers and primary care providers. Offering evening sessions allows the program to reach a greater proportion of prescribers.

Challenges included low enrolment and low response to surveys, and ethics board review delays across multiple institutions.

A patient partner was involved in this study and emphasized the importance of including people living with chronic pain in research projects. This program included people with lived experience of pain and was effective in understanding what has been done well and identifying improvements needed to prescriber education and participation. ECHO programs have the potential to build supports for informing opioid prescribing and tapering, improving health care provider knowledge of chronic pain management and changing the health system delivery of chronic pain care.

MEDOTATE: MEDITATION FOR DEPRESSION AND OPIOID USE IN CHRONIC PAIN — AN RCT FOR ASSESSMENT OF EFFICACY

Presented by: Ross Upshur; Abhimanyu Sud

This study aims to evaluate the efficacy of Sahaj Samadhi Meditation (SSM) for treating depression in people with chronic pain. Pain severity and pain-related function, quality of life, and medication use will also be evaluated.

The program was suspended due to the COVID-19 pandemic and is being redeveloped to an online format. In the meantime, the researchers conducted an umbrella review of all clinical interventions for improving depression among those experiencing chronic pain. Mind-body interventions and online cognitive behavioural therapy (CBT) were identified as promising interventions, and these findings will inform the adaptation of the meditation study.

The researchers noted that the COVID-19 pandemic has emphasized the importance of flexibility and adaptability of program design and implementation, as well as the importance of maintaining access to effective care for individuals living with chronic pain.

The adapted virtual protocol will allow for study continuation in the context of COVID-19 and may also address geographic and physical barriers to participation and provide new avenues for scalability. In addition, the protocol relies on community-based experts rather than physicians and psychologists, which may further improve implementation and scalability.

BLOOD TRIBE WINTER COUNT OF THE OPIOID CRISIS: EVALUATING ORIGINS, COMMUNITY RESPONSE, AND OUTCOMES OF KAINAI FIRST NATION'S OPIOID STRATEGY

Presented by: Rita Henderson; Terri-Lynn Fox

This study was driven by the Blood Tribe, in partnership with researchers from the University of Calgary. Four out of six co-investigators are Blood Tribe members.

The Blood Tribe is among the most affected First Nations in Canada and one of the most innovative in addressing the opioid crisis. They were the first to push the Alberta government to look for fentanyl to identify deaths due to illicit sources, have facilitated widespread naloxone kit distribution and have created a multidisciplinary task force with different lines of approach to addressing the crisis including police, teachers and medical professionals.

Many nation members experience inequities in access to primary care. Individuals may have opioid prescriptions for pain management but minimal follow-up to identify the source of pain or to manage pain. Prescriptions may not be the best solution, and the COVID-19 pandemic has prevented people from coming together, which is exacerbating existing issues. The closure of the supervised consumption site in Lethbridge, Alta., is, and will continue to be, a significant challenge for many people.

This study is working to create a winter count, an adaptation of a traditional Blackfoot approach that records memorable events pictographically (for example, on a bison hide). Investigators are asking nation members about the story of the opioid crisis, including major decisions and landmarks. This information is being documented to understand the situation today, learn and decide how to improve things for the future.

Emerging themes include the importance of working together, integrative approaches (such as partnerships with entities outside of the nation), enhancement of primary care to improve opioid prescription use and the value of recording the types of opioids and substances being used.

This study may not translate exactly to other First Nations, but there may be some transferrable lessons learned, including demonstrating to other nations how to go about this type of evaluation.

PANEL REFLECTIONS AND OPEN DISCUSSION

In this section, knowledge users reflected on the five research projects presented. Meeting participants were then invited to ask questions and a group discussion followed. This session was moderated by Manon Choinière, University of Montreal.

Brian Emerson, BC Ministry of Health — Panelist

It is timely and important to talk about opioids and pain together. The lack of appropriate treatment for pain is a key precursor to substance use disorder and substance-related harms. Chronic pain is a key public health issue, and it is critical to take a population health approach. Pain is a common determinant in both legal and illegal substance use. A common emerged theme t is the need to reduce opioid exposure in the population. High rates of prescription opioids are a driver of the opioid crisis, but that is only a part of the picture — uncontrolled pain is a key factor.

Attention should be paid to the unintended consequences of reducing opioids. A reduction in opioid exposure could be beneficial to an individual, but it could also be harmful — for example, by eliciting negative side effects. A balance is needed. Multidisciplinary and multisectoral approaches to pain and opioids should be considered. There are many other treatment options that could be equally or more effective with less harms. Finding the right mix is a challenge.

Fiona Campbell, University of Toronto — Panelist

Treatment of pain is a necessary aspect of preventing opioid-related harms. Pain is clearly an upstream contributor to opioid use harms — many people who use drugs have underlying pain, and many people with pain may require opioids.

There are gaps in access to pain care, a lack of awareness and specialized pain training amongst care providers and prescribers, and a lack of pain related research. It is essential to build capacity in primary care to assess and treat pain effectively. Effective management of acute pain in primary care using evidence based physical, psychological and non-opioid pharmacotherapy may prevent the need for opioids. We must recognize the value of traditional approaches, such as pictorial documentation and sharing circles, in addressing pain and the opioid crisis and developing and implementing interventions in First Nations communities.

New ways of delivering specialist pain management — such as virtual care, hub and spoke models — will help build capacity.

Critically, we need national coordination to ensure that people living with pain and people who use drugs have access to the care they need.

Vincent Raymond, Université Laval — Panelist

From a patient's perspective, it is important to understand that deprescription takes a long time.

Additionally, multidisciplinary approaches are very valuable and should be supported. Meditation and exercise, combined with other methods, are effective for pain management and for improving other concerns including depression — which is common among people living with pain.

Discussion (all participants)

Access to health care clinics is critical — a minority of people can access these interventions. Millions of people do not have access to the internet, let alone multidisciplinary care. Unaddressed pain can turn into much more serious problems, and many people are being left behind.

Some people can and do benefit from opioids, therefore deprescribing is not a solution for all patients who are taking opioids.

The COVID-19 pandemic has resulted in many chronic pain patients being prescribed high-dose opioids, and there is a wave of disaster coming. People with chronic pain bear the additional burden of the opioid crisis and COVID-19.

Many people with pain are forced to go to the illicit, unregulated market to treat their pain because they were denied treatment or do not have access to treatment. The researchers were asked if any studies investigated illicit consumption. One study is collecting data on whether patients are taking opioids that are not prescribed (Miller, J.), however, it was noted that the sample size is small and perhaps not that meaningful.

Data suggest that long term opioid use can induce hyperalgesia (increased sensitivity to pain). The researchers were asked about the mechanism by which decreasing opioid use is expected to decrease pain intensity and pain interference. In response, it was noted that self-management interventions have been tested in people with chronic pain, not necessarily on high doses of opioids. The hypothesis is that if people feel supported and have access to supports, their pain sensitivity and function may improve. It was also noted that the effects of interventions such as exercise may be similar to meditation, but that they work through different mechanisms. These are complex interventions with multiple ingredients and therefore, it is challenging to understand effects.

Session 2: Treatment

This session included three research presentations, a knowledge user panel and discussion relating to treatment in the context of the opioid crisis.

EVALUATING ONTARIO'S RAPID ACCESS ADDICTION MEDICINE (RAAM) MODEL OF CARE TO ADDRESS THE CANADIAN OPIOID CRISIS

Presented by: Kimberly Corace; Melanie Willows

Many persons with opioid use disorder repeatedly present to emergency departments (ED) due to gaps in care. This study evaluated the effectiveness of the Rapid Access Addiction Medicine (RAAM) clinic model in Ontario. RAAM clinics are flexible, walk-in models of care that provide immediate access to counselling, opioid agonist treatment (OAT), other pharmacotherapy, mental health services and triage to other community services. There are more than 50 clinics in Ontario.

A population-based, retrospective cohort study was conducted that incorporated provincial administrative data housed at ICES and propensity score matching methods at four RAAM clinics in Ontario (Ottawa, Sudbury, Oshawa and Toronto). Results demonstrated that the RAAM clinic model is beneficial for people with opioid use disorder, and potentially individuals experiencing harms from other substances. This study found a significant reduction in all-cause hospitalization and opioid-related hospitalization at 30 days. It also showed a significant reduction in a composite measure of ED visits for any reason, hospitalization for any reason and all-cause mortality at 90 days.

RAAM clinics offer important benefits to individuals with problematic opioid use, including a reduced overall risk of mortality, hospitalizations or ED visits. This clinic model is simple but effective, and these results demonstrate major promise that can be scaled up to other jurisdictions.

While performance of a gold standard randomized controlled trial was not an option given the urgency of this work, the team was able to use real-world data efficiently to evaluate the benefits of this program. Challenges included delays in analyzing data from additional centres to add power to the overall analysis. Additional data is expected by winter 2021.

From a knowledge user point of view, the RAAM clinics present an innovative model of care that must be evaluated to inform best practices. Individuals who access the clinics report that they are making a difference, and they feel the ability to self-refer is important. This study supports expansion, and there is significant interest in the model nationally and internationally.

HEALTH SYSTEM EVALUATION OF THE GAP IN TREATMENT FOR THE DELIVERY OF OPIOID AGONIST TREATMENTS AMONG INDIVIDUALS WITH OPIOID USE DISORDER IN ONTARIO

Presented by: Pamela Leece; Lisa Bitonti

Evidence-based care doesn't necessarily mean that people who need care have access to it. This study aimed to characterize the gap in treatment for OAT delivery among those with health problems related to opioid use, and assess costs associated with this treatment.

The study found that the proportion of people who were on OAT for six months or more decreased over time. For individuals on OAT who did not die during the study period, the total health care costs were lower than individuals who died or transitioned off OAT.

Individuals more likely to transition on or off OAT were male, had rural addresses or had a history of mental health diagnoses. Individuals least likely to transition off OAT had a primary care provider, or had a higher income. Males were more likely to be on treatment than females. Of the people who died, they were more likely to have increased age or history of mental health diagnosis. Individuals with a prescription from a primary care provider were less likely to die.

This study suggests a need to improve treatment retention, develop strategies to tailor care to certain populations, and optimize use of OAT to reduce opioid-related mortality.

The researchers noted that this study relied on administrative data, and therefore could only capture individuals receiving care. In addition, people may choose alternative forms of OAT, harm reduction or withdrawal management. Finally, the evaluation included direct health care costs and not societal costs.

From a knowledge user perspective, population-based evaluations are helpful to target policy and care interventions in areas of greatest need. This study can be used as a foundation for further analyses, and can identify more carefully where digital health supports need to be strengthened (e.g., in primary care).

IMPLEMENTATION EVALUATION OF BARRIERS AND FACILITATORS TO BUPRENORPHINE USE IN ONTARIO

Presented by: Pamela Leece; Lisa Bitonti

This study evaluated factors related to buprenorphine use — a first-line treatment in Canada. The study included a scoping review and interviews with patients, family members, professionals and those at system levels, as well as a stakeholder workshop to identify strategies to address identified barriers.

Barriers identified related to environmental context and resources, including availability of prescribers, beliefs about consequences including medication effectiveness, and social influences such as stigma and discrimination.

Strategies to address barriers: providing support for universal access and coverage; strengthening leadership, coordination, and information sharing; improving training at all levels; and addressing the multiple levels of stigma within the health system.

This study provides a systematic understanding of barriers and facilitators to buprenorphine use in Canada to inform decision makers, planners and others with evidence-based strategies to advance implementation of buprenorphine. More research is needed to understand the effectiveness of various strategies.

Knowledge users such as service providers and policy makers can use this information to plan changes at the macro (policy) and micro (service) levels. This study emphasizes the importance of education and training across teams, not just within individual disciplines, as well as the flow of information to facilitate the coordination of care and the meaningful inclusion of people with lived experience.

PANEL REFLECTIONS AND OPEN DISCUSSION

In this section, knowledge users reflected on the three research projects presented. Meeting participants were then invited to ask questions and a group discussion followed. This session was moderated by Nina Cluny, CIHR-INMHA.

Fran Kirby, Association of Faculties of Medicine of Canada — Panelist

There is clearly a gap in treatment when it comes to OAT, and it is important to consider population-based needs, access to treatment, barriers (e.g., buprenorphine) and continuity of care.

From a professional development perspective, the RAAM model is particularly interesting, and ongoing training and mentorship are critical for care providers.

Lisha Di Gioacchino, Community Addictions Peer Support Association — Panelist

There remains a need to implement approaches that reduce substance use disorder (SUD) stigma across the health care system, including those that increase understanding of SUDs and trauma-and violence-informed care. Increasing access to SUD treatment through evidence-based Rapid Access Addiction Medicine (RAAM) clinics is a public health priority. Preliminary results of sex and gender-based analyses demonstrate services that support women's substance use health require expansion.

Peter Selby, Centre for Addiction and Mental Health — Panelist

Theoretical models can be useful to inform clinical practice. Furthermore, some providers have anti-OAT sentiments because of stigma. The opioid treatment retention rates reported today represent a "good news" story.

Collaboration is important to ensure providers, people with lived experience, researchers and policy makers are not working independently, or competing with one another. The ultimate goal should be a learning health system that links data, analyses, implementation and training with policy.

Discussion (all participants)

The researchers were asked whether anyone considered sex and gender differences in their research. One study (Corace, K.) found women presented with higher depression and more severe opioid, substance use issues and gendered barriers to care.

It was noted that it can be difficult to manage opioid use disorder with OAT given the availability of fentanyl, which may not be responsive to conventional OAT treatments. In addition, there is a need for mental health care.

The COVID-19 pandemic has impacted opioid treatments — for example, OAT regulations have been relaxed and long-acting injectables have emerged.

In addition, the pandemic has resulted in the virtual delivery of some services, which has had a number of impacts. The digital divide, represented by factors including access to technology and digital literacy, has become more apparent. Virtual care models have resulted in some people feeling empowered to be responsible for their health care, although not all services can be delivered virtually. Trauma and violence-informed care is not readily translated into a virtual care environment, and there is a need for adequate personal protective equipment (PPE) for in-person services. While some people may feel more comfortable receiving care virtually in their home environment, it is important to ensure that services are inclusive and can reach individuals that may not be able to access virtual treatment.

Existing barriers may have been compounded by the pandemic — for example, as a result of support systems being taken away. Additional factors such as increased poverty, partner violence and impacts on women, access to healthy food and individuals with comorbid mental health concerns may also be exacerbated by the pandemic.

The researchers were asked if any projects looked at Indigenous issues. It was noted that Indigenous Peoples were included in some samples, but due to the short amount of time to conduct the studies, it was difficult to build relationships and look at Indigenous issues specifically and in-depth.

Day One Closing Remarks

Nina Cluny, CIHR-INMHA

In concluding Day One of this workshop, it was noted there is some networking happening in the chat, which is great to see in a virtual format.

Some common themes have emerged, including the value of multidisciplinary approaches to address pain, concerns around access to services and primary care capacity and physician education. There is a need for people with lived experience to be involved and embedded from study design through to implementation, knowledge mobilization and evaluation.

The COVID-19 pandemic has clearly had a huge impact on service delivery, as well as research. There have been diverse outcomes for people who use substances — including pros and cons — due to the pandemic.

Better understanding the barriers to treatment for pain and substance use disorders can ensure that policy and practice decisions are made based on the best possible evidence.

Session 3: Harm Reduction

This session included three research presentations, a knowledge user panel and discussion relating to harm reduction in the context of the opioid crisis.

INTERVENTIONS FOR THE OPIOID CRISIS: AN UMBRELLA REVIEW OF SYSTEMATIC REVIEWS

Presented by: Amir Razaghizad; Svetlana Puzhko

This study synthesized existing reviews to identify the breadth of literature regarding harm reduction strategies. Two areas were focused on: overdose education and naloxone distribution and interventions to prevent common infections in opioid users. Data were pending for a separate project on policies, programs and interventions targeting opioid prescribing.

The available research demonstrated there is robust evidence that overdose education and naloxone distribution (OEND) programs produce long-term knowledge improvement regarding opioid overdose, improve attitudes towards naloxone, provide sufficient training for participants to manage overdoses safely and effectively, and effectively reduce opioid-related mortality in community settings.

This study also found that high concentration intranasal naloxone has similar efficacy as compared to intramuscular doses at the same dose, whereas lower concentration intranasal naloxone is less effective. Studies were inconclusive regarding the need for secondary care (e.g., hospital transport) after overdose rescue.

Most studies reviewed for the naloxone project pertained to self-identified persons who use heroin, and limited data was available for individuals taking prescription opioids.

Regarding interventions for preventing common infections in opioid users, the researchers found sufficient evidence to support opioid substitution therapy to prevent HIV. Needle exchanges are effective for hepatitis C prevention. Additionally, there is some evidence to support the effectiveness of interventions to prevent infectious endocarditis.

The researchers conclude that there is strong evidence to suggest OEND programs should be widely implemented in communities with drug supplies contaminated with ultrapotent synthetic opioids (e.g., fentanyl). However, additional research is needed to minimize barriers to naloxone administration, and to better inform optimal modes of overdose reversal and the need for after-overdose care.

Implementation of interventions with known effectiveness to prevent opioid-use associated infections (OUAI) will improve OUAI-related morbidity and mortality.

THE ONTARIO NALOXONE PROGRAM FOR PHARMACIES (ONPP): A MULTIPLE METHOD EVALUATION

Presented by: Tara Gomes; Glenn McAuley

This study evaluated the Ontario Naloxone Program for Pharmacies (ONPP) — a program introduced in Ontario to provide free naloxone kits through pharmacies.

Over time, there was growth in naloxone distribution through this program. In March 2018, a policy change removed the requirement for individuals to provide ID to receive naloxone kits. This resulted in a considerable increase in people accessing kits.

Regional and other factors influenced uptake. Higher dispensing of naloxone kits was seen among younger individuals, people receiving OAT treatment, individuals receiving 11 or more opioid prescriptions and individuals with a past opioid-related emergency department visit. Rural areas had lower rates of naloxone kit distribution.

Benefits of this program included increasing the availability of naloxone, particularly in parts of the province where pharmacies existed, but other supports were not necessarily available. In addition, pharmacies are often very accessible in communities, as many have extended hours and are open on weekends. Patients reported concerns around a lack of privacy in the pharmacy (including for training on how to use the kit) and a lack of empathy from pharmacists was sometimes noted.

This study did not find an association between increased kit dispensing and opioid-related mortality. The researchers note that this could be related to fentanyl entering the drug supply. Take-home kits are effective, but this approach alone is not sufficient. Multiple complementary interventions are required.

In summary, this study provides evidence to support naloxone kit distribution through pharmacies. Geographic variation is considerable, with lower access generally in rural locations where novel approaches to naloxone distribution may need to be considered. Deaths due to

opioids are increasing, especially due to the COVID-19 pandemic. The researchers suggest that these trends reinforce the need for continued and improved access to harm reduction tools like naloxone, with deaths likely be even higher if pharmacy-dispensed naloxone kits had not been made available.

ASSESSING A TAKE HOME NALOXONE PROGRAM THAT PROVIDES FREE KITS TO ALL: USING EFFECTIVENESS AND COST-EFFECTIVENESS ANALYSES TO DETERMINE THE OPTIMAL DISTRIBUTION

Presented by: Eldon Spackman; Amy Woroniuk

This study evaluated the Community Based Naloxone (CBN) program, which ensures that individuals at risk of witnessing an opioid poisoning obtain injectable naloxone kits and understand how to respond correctly. The kits and training are available at no cost. From Jan. 1, 2016, to June 30, 2020, there were 271,681 naloxone kits distributed across Alberta and 2,093 registered sites. There were 18,374 reported opioid overdose reversals.

This program is cost-effective and likely averted an estimated 747 deaths between January 2015 and June 2019. Results suggest a 21% decrease in opioid-related deaths for every 10,000 kits in circulation.

Previous studies have concluded that naloxone programs for those at risk of opioid overdose and their friends and families are effective. This evaluation demonstrates that this program is being used effectively and supports the continued and expanded distribution of injectable naloxone kits.

PANEL REFLECTIONS AND OPEN DISCUSSION

In this section, knowledge users reflected on the three research projects presented. Meeting participants were then invited to ask questions and a group discussion followed. This session was moderated by Susanna Ogunnaike-Cooke, Public Health Agency of Canada.

Erika Dupuis, Canadian Students for Sensible Drug Policy — Panelist

From a harm reduction, youth-centred lens, it is important to advocate for safe supply and expansion of services in specific areas. There are also barriers for certain sub-populations that need attention, including black, Indigenous and other people of colour (BIPOC) — especially youth. We now have research and data, but it is crucial to apply it to advocate for greater access to services and safe supply.

It is also important to acknowledge that these programs aren't necessarily enough, complementary services are needed.

Mary Ellen Hill, Lakehead University — Panelist

Despite positive evidence of uptake on take-home naloxone kits, there are still barriers affecting uptake. For example, access is an issue in rural and remote areas where there are no pharmacies, and in urban areas with limited pharmacies. There is a need to look at expanded access to overcome these barriers.

It is also worth noting that in many cases, one dose of naloxone may not be sufficient to reverse an overdose.

Nick Boyce, Ontario Harm Reduction Network — Panelist

Adding to the discussion on access issues, it is also important to consider individuals who cannot get to a pharmacy — for example, individuals who do not have transportation. There are also limitations on the number of kits one person can pick up, which could be a barrier for individuals wanting to pick up multiple kits to distribute to friends. Perhaps other agencies could distribute kits and therefore expand access.

The illegal drug supply is shifting rapidly and naloxone can't reverse all overdoses. We are dealing with a drug policy crisis, which includes increasing deaths due to other substances such as stimulants and methamphetamine. It is important to address the root causes of overdoses — drug criminalization and prohibition.

Discussion (all participants)

Having this data to demonstrate what interventions are working is valuable.

It was noted that in addition to pharmacies and public health units, other centres are distributing naloxone kits, such as Aboriginal Health Access Centres, shelters and outreach centres. In addition, centres can distribute up to two kits per person. Not all pharmacies are aware that they are permitted to distribute two kits, or that identification is no longer required. Information on these policy changes is not effectively disseminated. A workshop participant volunteered to send a memo to pharmacies to inform them of these policies.

The COVID-19 pandemic has resulted in extremely high levels of toxicity in the drug supply. It is discouraging to see such limited movement on safe supply and other necessary interventions. It was also noted that three-quarters of deaths happen at home. If people have a home where they can use substances, they will not use an injection site.

The pandemic has continued and exacerbated barriers to accessing naloxone or other existing interventions. Social distancing has also resulted in hesitancy to access services.

The uptake of harm reduction programs is lower in rural areas and remote communities. Reaching out to these communities and addressing this inequity is important. We know that there are more than 4,300 community pharmacies in rural areas and more than 4,000 have dispensed at least one kit.

The lack of privacy in pharmacies is a deterrent that should be addressed — for example, by providing private spaces where possible. Pharmacist education must also be improved, both with respect to policies as well as to address stigma.

It was noted that approximately 60% of people who receive naloxone would administer it when they witness an overdose. Kits are large and not easy always to carry, and kits with needles can trigger some individuals. It may be beneficial to distribute intranasal naloxone instead or as well.

Session 4: Consumption Services

This session included three research presentations, a knowledge user panel and discussion relating to consumption services in the context of the opioid crisis.

ANALYSIS OF SPATIAL AND TEMPORAL RELATIONSHIPS IN ONTARIO FOR SUPERVISED CONSUMPTION AND OVERDOSE PREVENTION EVALUATION (ASTROSCOPE)

Presented by: Ahmed Bayoumi; Angela Robertson

This study assessed whether supervised injection sites (SIS) and overdose prevention sites (OPS) were associated with decreases in fatal and non-fatal overdoses in Ontario. The researchers compared neighbourhoods with SIS or OPS sites to those without, and looked at data relating to all opioid-related overdoses in Ontario from July 1, 2016, to Sept. 30, 2019.

The median age of individuals who overdosed was 40, and 73% were male. When tested, fentanyl was present in 75% of overdoses. Fifty per cent of overdoses occurred in regions representing 17% of the population. This concentration was more pronounced for women, where 50% of overdoses occurred in regions representing 6% of the population. Supervised injection sites were only available in a small minority of communities where people overdose. The presence of a SIS was not associated with a lower mortality rate.

The researchers note there is a need for innovative methods for supervising/witnessing the injection of drugs. Supervised injection sites and OPS may not be sufficient to decrease mortality in a setting with a toxic drug supply.

This study revealed that 90% of overdoses are happening outside of areas with SIS. People who use drugs are dispersed, and therefore there is a need for overdose prevention supports across the geography.

The broad utilization and introduction of fentanyl and poisoning of the drug supply points to a need to accelerate other interventions, including safe supply.

IMPLEMENTING SUPERVISED CONSUMPTION SERVICES IN ACUTE CARE: EVALUATING A NOVEL OPIOID CRISIS INTERVENTION

Presented by: Elaine Hyshka; Kathryn Dong

This study collected quantitative and qualitative data to evaluate the Royal Alexandra Hospital's in-hospital supervised consumption site (SCS). Of 13,000 total visits, patient characteristics and uptake were assessed, as well as patient and staff perspectives on SCS implementation. Patients receiving pain or withdrawal management and those on OAT were more likely to use the SCS.

Barriers to access from a patient perspective: worries about changes to care back on their unit and worries about being stigmatized once they return, fears of criminalization and limited service offerings (e.g., guests not permitted, smoking not accommodated).

Facilitators reported by patients: peers and peer support workers on the addiction medicine consult team, the ability to use drugs safely, and the ability to avoid sanctions.

Barriers reported by staff included feeling conflicted about SCS or harm reduction (e.g., stigma), and a lack of clarity regarding post-consumption care.

Facilitators reported by staff included improved relationships with patients and improved patient safety.

Perceived impacts of the in-hospital SCS include a safer hospital environment, improved hospital culture, enhanced retention of patients to complete their treatment and changes to patient care associated with SCS use (e.g., withholding medication).

Some patients were more likely to access acute care SCS than others. Access barriers must be addressed to improve uptake. The SCS may reduce risks associated with in-hospital substance use. Guidance to staff should be improved.

There is a need to develop implementation guidelines and evaluate the impact of in-hospital SCS access on patients' health and hospital outcomes. Findings from this study can help inform future SCS quality improvement.

EVALUATION OF OVERDOSE PREVENTION SITES (OPS) IN TORONTO: AN URGENT PUBLIC HEALTH RESPONSE TO THE OPIOID CRISIS

Presented by: Michelle Firestone; Zoë Dodd

OPS differ from SCS and SIS. The OPS model was a unique, community-driven intervention that provided a space for people to use pre-obtained drugs under the supervision of trained volunteers and/or staff. In early 2019, provincial funding for the OPS model was cut. This study undertook a qualitative evaluation of five OPS sites in Toronto.

This evaluation found that OPS are effective in preventing overdose and reducing harms associated with drug use. Clients reported that the non-clinical atmosphere was a driving factor in their use, reporting that the sites were a safe community that made them feel a sense of belonging. Staff felt that the sites were a safe place to prepare and use drugs, which prevented overdoses. Staff also reported experiencing pervasive burnout and complex trauma, which is common in the harm reduction sector.

There is an urgent need to fund more SCS in Toronto and various types and locations are needed to address the needs of diverse populations. The OPS model is easier to scale up than other models (e.g., could be added to shelters, drop-in centres), but this scale up has not happened.

Providing access to injection support, whether from staff or peers, is a critical part of making supervised injection sites accessible to people who have disabilities or challenges with injecting themselves.

There is a need for places for drug users to smoke in a supervised setting. Smoking fentanyl is popular. In addition, opioids are not the only drugs being used, as there is an increase in use and overdose of other substances, including methamphetamine, stimulants and benzodiazepines.

Stable funding is needed to maintain adequate pay and benefits for OPS staff, in addition to trauma and grief supports for these workers.

The meaningful ongoing involvement of people who use drugs is needed in the development and delivery of all substance use interventions and evaluations.

The researchers noted that two Indigenous-specific focus groups were a part of this study, but this data has been delayed due to the COVID-19 pandemic. In addition, the Ontario government's rapid shift away from this model, and regulatory barriers from Heath Canada, have been added challenges.

PANEL REFLECTIONS AND OPEN DISCUSSION

In this section, knowledge users reflected on the three research projects presented. Meeting participants were then invited to ask questions and a group discussion followed. This session was moderated by Paul Loo, Health Canada.

Charlene Burmeister, Canadian Association of People Who Use Drugs – Panelist

Involvement of people with lived and living experience is critically important to research and intervention projects. While a systems-level approach is beneficial, the expertise of people with lived and living experience is paramount. People with lived and living experience should be involved with prioritizing initiatives/research and anything that impacts people who use drugs. They should lead the way from concepts to design, development and delivery with the guiding philosophy of "nothing about us without us." Peers create a sense of safety, camaraderie and present an organic way to address community issues.

In addition, people with lived and living experience bring diverse perspectives that are essential to projects.

Tali Cahill, Sandy Hill Community Health Centre – Panelist

People with lived and living experience should also be consulted in the development of research questions. It is important to ask the community what questions need to be answered. One example is non-fatal outcomes for people who use drugs; if we are only investigating fatalities, we aren't looking at the whole picture of the potential benefits of an intervention and what other services might be needed (e.g., systems navigation).

Changing hospital culture is very difficult and requires public support among physicians and nurses. It would be interesting to look at how opinions have changed following the implementation of a supervised consumption site in a hospital setting.

Discussion (all participants)

Decriminalizing drugs and meaningful stigma reduction efforts are needed to improve treatment for people who use drugs. Stigma remains a major barrier to treatment for many people, and reducing stigma is difficult while drugs remain criminalized.

Within acute care settings, there is a need to address existing stigma and workplace culture. Health care providers also need training, and that training should include people with lived and living experience. Evidence shows that perceptions are changing, but there is much work still to be done.

Drug use is not concentrated in certain regions and therefore, services in the spaces where people use drugs are important. The OPS model is low-barrier, less expensive and equally responsive compared to other models of harm reduction services. This model can be embedded in a variety of institutions and settings. Peer involvement in these services is valuable to help create safe and welcoming spaces that people will use, therefore saving lives.

Conclusion

This two-day workshop featured 14 projects, panel reflections and open discussion sessions with researchers, health care providers, policy makers and people with lived and living experience of substance use. Current research results were presented, and overarching themes emerged that could inform changes to national, provincial, municipal and/or private health policy and health coverage.

A summary of some overarching themes follows below:

- **Training is critical** and needed for health professionals to support the needs of people who use drugs, and this includes training pharmacists as they play a key role in harm reduction. Stigma remains a major issue and is a barrier to care for many individuals. Privacy is an important consideration for harm reduction programs.
- The **meaningful involvement of people with lived and living experience** of drug use is essential. The expertise of these individuals should be considered for research, and the development and implementation of services and interventions for substance use-related harms.
- Despite evidence to support the efficacy of certain programs, including naloxone distribution and supervised consumption services, **access and funding are major challenges**. There are inequities for many sub-populations and limited data to inform service delivery. Individuals in rural or remote areas, those with transportation challenges and people with disabilities were highlighted as specific populations that are particularly impacted. There is a lack of research on many populations, including Indigenous Peoples, racialized individuals and youth.
- Finally, the **COVID-19 pandemic has had a dramatic impact** on people who use drugs, exacerbating existing issues, impacting services and contributing to an increase in toxicity in the drug supply. The pandemic has also hampered research efforts, including many of these projects.

This funding opportunity was designed to provide health care practitioners and policy makers with evidence on the effectiveness of opioid crisis-related interventions to inform decision-making and reduce the problematic use of opioids.

Thank you to all who participated in this knowledge exchange event. The meeting book for this workshop is available to the public upon request. Requests can be directed to the CIHR Contact Centre: *support-soutien@cihr-irsc.gc.ca*.

More information on CIHR's research in substance use can be found online at *https://cihr-irsc.gc.ca/e/50927.html*.

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