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COMMENT

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An integrated knowledge mobilization approach to substance use health

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Abstract

The Canadian Centre on Substance Use and Addiction (CCSA) has a mandate to provide national leadership in evidence-informed analysis and knowledge mobilization to advance solutions that reduce substance-related harms. Doing this work effectively requires an understanding of the needs, priorities, perspectives and ideologies of multiple groups. Partnerships across various sectors support a full understanding and acknowledgement of the systems that create differential health outcomes for individuals and communities. CCSA has developed an integrated knowledge mobilization model to guide our work in supporting better substance use health outcomes. Our model begins by understanding the context a particular need (for example, research question and practice improvement) is occurring within. This involves engaging key partners with multiple viewpoints to understand the current situation, constraints and opportunities, including barriers to care, social and structural determinates of health and community strengths and assets. Based on this, the steps that follow involve determining the appropriate action and CCSA's unique role to respond in alignment with partner and community priorities to advance solutions within the given context. This leads to an iterative process of generating and mobilizing knowledge. This integrated and collaborative approach ensures that responses are relevant to the identified knowledge gap, that recommendations reflect partners' realities and that our efforts will achieve impact while minimizing the risk of harm. Through an iterative process of generating and mobilizing knowledge (for example, supporting the scale and spread of innovations, developing new tools and generating or tailoring evidence for a specific audience/context/substance/setting, among others), outputs such as increased awareness, knowledge, use of information and strengthened capacity occur. Together, these efforts contribute to the outcome of a healthier society for people living in Canada, where multiple forms of evidence advance substance use health. Meaningful engagement of partners and evaluation of our efforts are ingrained throughout the model to ensure our work has the intended effects. We share our approach for the consideration of other organizations (in the space of substance use health and otherwise) to engage partners in the development of evidence and other resources that can drive impactful programs, practice and policy.

Keywords Knowledge mobilization, Substance use health, Evidence, Health systems, Partnership, Outcomes, Impact, Engagement, Evaluation

Introduction

Substance use health and the care system

Substance use health (SUH) is increasingly being understood as a component of overall health that exists along a spectrum [1]. An SUH framework provides an inclusive approach to the relationships people may have with substances including no use at all, increasing risk, declining health and use that can be categorized as a substance use disorder, all while recognizing that

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substances may be used for many different purposes that result in benefits and harms [1]. It also recognizes that an individual's relationship with substances is fluid; it may change over time or have a different status in relation to different substances. This shift in understanding on the use of substances is critical to inform effective responses. It ensures strategies are grounded in supporting the well-being of people living in Canada, as opposed to punitive responses which criminalize substance use and continue to perpetuate stigma and other systemic harms, particularly for those from racialized and Indigenous communities [2, 3]. This is critical as an average of 22 lives are lost each day to opioid toxicity events in Canada [4] – nearly one per hour. This loss is felt by individuals, families and communities, and it is economically reflected in 49.1 billion Canadian dollars in lost productivity, health care utilization, criminal justice and other direct costs [5]. Taken together, this underscores the need to better understand and act on a multitude of factors.

Systems have long upheld oppression that result in specific groups experiencing disproportionate harms in relation to health broadly [6] and to substance use health specifically [7]. The systematic discrimination of some groups over others historically and at present influence health outcomes by way of, but not limited to, racism, sexism, ableism, heteronormativity, cisnormativity and the intersections of these factors [7, 8]. This has occurred through a long legacy of mechanisms such as policy, criminalization and enforcement that have directly and indirectly afflicted the health and social outcomes of groups targeted by systems of discrimination. The criminalization of some substances (for example, cocaine and methamphetamine), and the accessibility of other regulated substances (for example, alcohol and cannabis), deserve consideration as both access and prohibition have unique impacts on systems, communities and individuals [9]. For example, the interplay of systemic racism and substance use regulations has resulted in poorer access and experiences of care [3, 10] and greater criminal penalties for First Nations, Inuit, Métis (FNIM) and other racialized groups [3, 11]. Stigma towards substance use in and of itself remains pervasive [12, 13]. These harms then intersect with other social characteristics for which an individual may be discriminated against, compounding the negative impacts [13, 14]. Together, stigma presents significant barriers to accessing services and supports; impacting well-being, increasing the use of high-risk behaviours (such as using alone) and ultimately influencing mortality [15]. In this way, substance use health is strongly related to social and structural determinants of health, and intersects with physical and mental health, all of which compound health inequity [16–18].

The SUH care system is fragmented, difficult to access and navigate and varied in availability across the country (particularly disparate in rural or remote communities). It presents barriers of long wait lists, service provision across both public and private organizations, high costs for private treatment options and a lack of individualized treatment [15]. These barriers have resulted in peers and allies often being left to fill gaps where health, social and justice systems are not responding to the needs of those who use substances. These contributions come at great emotional cost to the well-being of providers, who have often gained expertise from their own lived experience [19].

All of these components must be considered when working to enhance health systems – systems that address oppression, colonization, genocide and racism as the root causes of harm as opposed to only symptoms [15, 20]. Given the stress that insufficient SUH care is adding to an already-strained health system, advances cannot come soon enough. Addressing SUH presents a unique opportunity to establish collaborations across multiple areas. Working with partners in sectors such as medicine, mental health, housing and social justice can support system improvements. Addressing concerns in isolation, as opposed to holistically and synergistically, ignores the interplay of these factors. For example, providing mental health care without addressing SUH, or supporting SUH without addressing housing concerns, falls short of truly supporting sustained well-being [15]. It is therefore imperative that SUH be addressed with intersectionality in mind, and makes cross-sector partnerships essential to achieving meaningful difference in the quality of life for individuals and communities in Canada.

Of utmost importance in any response to substance use harms is the meaningful inclusion of people with lived experience, as they hold the cumulative expertise and knowledge to identify, contextualize and inspire innovations that advance responses. A unique model of generating and mobilizing evidence is required to account for the multiple forms of evidence and knowledge as they relate to SUH (that is, traditional wisdom, lived and experiential expertise and empirical evidence) and to the sociopolitical structures that influence and intersect experiences of healthcare across jurisdictions in Canada. We have created one such model.

Moving knowledge into action

The Canadian Centre on Substance Use and Addiction (CCSA) is Canada's only agency with a legislated national mandate to reduce the harms of substance use for people living in Canada. Created by an Act of Parliament in 1988, CCSA provides national leadership to address SUH with an evidence-informed harm reduction

approach. Our work involves (1) convening key partners and community members around topics with national significance, (2) responding to emerging priorities by generating and mobilizing evidence that guides and supports the development of policies and practice that prioritize public health, safety and well-being and (3) working directly with communities to shape solutions and strategies to improve SUH.

Mobilizing knowledge aims to bridge the gap between what we know and what we do. Yet, integrating evidence into tangible interventions or uptake for practice and policy remains an ongoing challenge within health systems, including the field of SUH [21]. To bridge this gap, CCSA responds to the needs of people living in Canada with knowledge that is valuable and relevant to them. Given the many areas that SUH is related to, CCSA's partners encompass, but are not limited to, people with lived expertise, FNIM communities and those working in policy, healthcare, public health, public safety, research and youth support, among others. Working with these key partners and communication with diverse audiences requires purposeful and continuous engagement throughout the initiative to achieve the desired outcomes.

The process of moving knowledge and evidence into action has been described using several terms (knowledge mobilization, knowledge translation and dissemination, among others) [22] reflecting different levels of engagement and directionality of information flow (for example, passive dissemination versus active implementation). There are a number of knowledge mobilization (KM) theories, models and frameworks that have been developed to guide the uptake of knowledge into practice [23]. These various approaches to KM illustrate processes by which knowledge is generated and implemented effectively and draw on theories and from various fields including communications, adult education, psychology and sociology. While most KM models are based on western theories, Indigenous approaches are emerging to support KM of Indigenous knowledge into health services [24]. Utilizing a KM model within a particular context often involves tailoring it to the specific complexities and considerations of the circumstance and modifying it to meet and respond to relevant needs or conditions. An integrated KM approach centres the active involvement and participation of people who are concerned with and affected by the knowledge throughout the process [25, 26].

Building on the theories and approaches contained in existing KM frameworks, we aimed to create an integrated KM model to guide our work at CCSA. To do so, we first completed a review and synthesis of the existing KM models found in literature and included in Knowledge Brokers' training and ongoing professional development [27]. We then reflected on the barriers and facilitators to implementing these models in practice within the specific context of SUH, with a particular focus on reviewing past initiatives and evaluating the key activities that had garnered our greatest success in achieving impact. From here, we identified the stages of our own model and shared it broadly to seek input and validation from multidisciplinary teams within our organization. After incorporating all feedback, we have created a model that reflects the integrated KM approach taken at CCSA to respond to the unique aspects of the SUH contexts (Fig. 1). This model is intended to be applied in all the work we do at CCSA to ensure it is grounded in meeting the needs of people living in Canada and that all

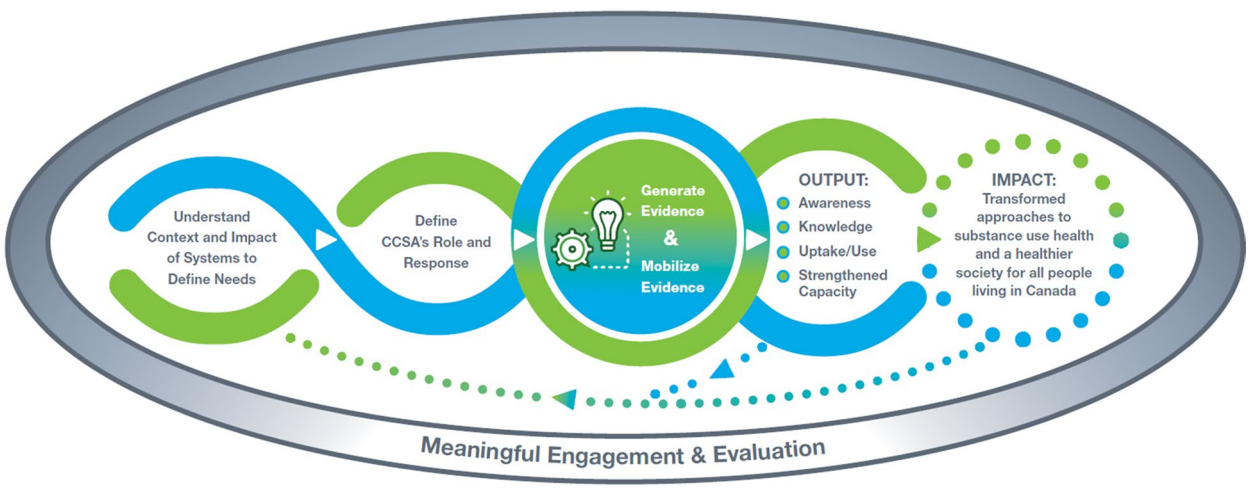

Fig. 1 CCSA's integrated knowledge mobilization approach to advancing substance use health

critical considerations are taken into account throughout our initiatives.

Our model begins with the need for a fulsome understanding of the context and systems our partner's needs are occurring within. This is a critical first step, and it often occurs in conjunction with the second step of defining CCSA's role. As we come to understand factors related to the federal, jurisdictional or community need, we simultaneously learn what resources or supports may already be available and the unique niche that CCSA can fill to support these needs. It is only after this is established that we enter the iterative stages of generating and mobilizing evidence. Once this cycle is complete (determined by partners sharing that our response has filled a gap), we achieve outputs such as increased awareness, greater use of knowledge or strengthened capacity. These outputs then sequentially contribute to impacts that improve SUH for individuals, communities and society – which is what we ultimately seek to accomplish. The components of meaningful engagement and evaluation are meant to take place throughout all phases of the model. This ensures that we are working in full relationship with partners to seek continuous feedback and assess our progress towards the intended outcome, allowing us to refine our strategies as needed. Each component of the model is described in further detail below. This framework also guides our efforts to continuously improve the way that we work as an organization to strengthen collaborations and achieve collective impact. We share our model in this paper as an invitation to other organizations to assess how it could enhance the relevance or impact of their own work.

Understanding context

Our model highlights the importance of understanding the context that factors related to SUH are operating within. This fulsome understanding is a crucial step of our approach and ensures that our efforts to respond are appropriately informed and can also address the complexity and interrelations between the systems that have an influence on well-being, including health, social and justice sectors. This first stage also ensures that any solutions we offer do not create or exacerbate negative consequences for individuals, communities or settings (for example, when deprescribing was implemented as a solution to the opioid crisis, it created new barriers for individuals living with chronic pain to access pharmacological treatment).

Some examples of pieces we consider when understanding the context include community, jurisdictional or national priorities; the political climate; buy-in from influential key players; funding; historical events (for example, over 150 years of residential schooling for FNIM children); the impacts of systemic oppression and discrimination of racialized groups and FNIM people. In addition, we consider how these all intersect with substance use health. Anticipating changing factors, including emerging needs and upcoming policy or regulatory changes, is also considered to ensure our work will continue to be relevant in an evolving context. In this phase, CCSA makes a concerted effort to learn with and prioritize the needs of groups experiencing disproportional harms from SU, FNIM populations and those with lived SUH and mental health experience. The information gathered at this stage is distilled to identify a specific and real need that, when addressed, will make a significant difference at the national, jurisdictional or community level.

Defining our role and response

Once a foundational understanding of context is established, this next phase involves determining and validating CCSA's role in responding to the people we serve and advancing strategies to meet identified needs and priorities as defined by partners and communities. This is done by first assessing if the request is in line with our organizational mandate, values and purpose. Indeed, there are times where our national mandate places us in the best position to respond and others where other key players are a better fit to advance solutions given their existing mandates, relationships or positions of influence. We seek to find opportunities for coleadership and reciprocal learning. Finally, we validate both our internal capacity as well as the external partners' capacity to advance or implement a given solution.

CCSA's response to the identified needs may take many forms and are explained in more detail in the following section. Responses may focus on generating new evidence to fill a knowledge gap, connecting and convening diverse partners to codevelop solutions or action plans, and supporting uptake and implementation of existing knowledge into various initiatives. This may also involve providing support to adapt and implement already established knowledge or to support the scale and spread of a successful initiative to another jurisdiction or population of people living in Canada.

Generating and mobilizing evidence

The phase discussed here – generating and mobilizing evidence – is the crux of how CCSA actively meets the needs of systems, communities and individuals. Here, evidence is understood beyond its traditional meaning (for example, information in scientific publications). Over time, there has been a shift in how public health organizations, including CCSA, understand and value different forms of knowledge. In our model, evidence

includes the expertise of individuals with lived experience, traditional and cultural ways of knowing and experiential and practice-based experience. All of these forms of evidence, in combination with empirical evidence, are needed to understand SUH and guide the development of policy, programs and practices that reduce the risk of related harms.

Generation of evidence can mean actively conducting novel studies to contribute new evidence, assessing the quality of existing evidence or synthesizing and tailoring evidence to specific populations or settings. It can also include, but is not limited to, drawing on narratives, illustrations of lived experience or traditional storytelling that holds knowledge and wisdom. Mobilization of evidence is multidirectional and continuous with inputs from partners who share their knowledge and needs to inform our work and outputs that provide evidence or resources to guide our partners' initiatives. An explicit focus on KM is necessary to ensure that evidence reaches the people who need it and that it is provided in a manner that they can use. On the basis of relevant needs and the scope of the audiences, our KM strategies might focus on more passive forms, such as dissemination of new knowledge or products through various channels. In contrast, they may be more active, such as working directly with partners to identify barriers and facilitators and supporting the implementation of evidence for relevant policy and practice decisions. KM at CCSA may also take the form of building capacity amongst our partners, such as increasing subject matter expertise or clinical skills to further initiatives beyond information sharing.

These processes of generating and mobilizing knowledge are iterative and are meant to complement and build on one another. Going through these stages with the partners who will use or be impacted by the evidence deepens our understanding of which responses will have the most meaningful outcome and reduce the risk of negative unintended consequences.

Outcomes and impact

As a result of this approach, there are multiple possible outcomes that reflect CCSA's contributions to the field. Depending on the needs identified and CCSA's role in advancing solutions, individuals first become aware that there is evidence or resources available to them. Following this, partners may experience knowledge change, where they become more familiar with the most recent and comprehensive information on a given topic. Where relevant for their contexts, this knowledge can then be applied to shape decision-making, improve practice and also improve the capacity of those working across various sectors to better support SUH. As a result of the diverse partner and community engagement that takes place throughout the model, new partnerships and collaborations may also emerge. These can reduce the duplication of efforts, lead to the scaling of interventions to other settings without having to replicate the foundational work and contribute to greater collective impact. Ultimately, the goal is that all forms of evidence enhance approaches to SUH – contributing to a healthier society for all people living in Canada.

Our model recognizes that once one or all of these outcomes are achieved, some aspect of the context is then altered as well (for example, change in knowledge or capacity). New opportunities to build on initial efforts may emerge and new needs can be assessed, allowing for the cycle to begin again and continuous improvement to occur. In this way, evaluation is embedded throughout our process. Guided by program logic models that define the progression of short- to long-term outcomes towards a specific goal, indicators allow us to measure and assess how our efforts are unfolding towards the desired impact. We rely on a number of indicators, each categorized to measure quality of partnerships, knowledge and capacity, reach and relevance and impact throughout each phase of the framework. For example, our goal to have practice be founded in evidence is monitored by assessing awareness and access to our resources in the short-term, increasing uptake and capacity to use the knowledge in the medium-term, and applying knowledge in practice and/or policy over the long-term, ultimately leading to impact. These evaluations are conducted throughout our work, providing an ongoing feedback loop where partner input and emerging evidence are continually considered. This allows us to pivot and refine our approach and to ensure that our efforts are always in alignment with the desired outcomes.

Considerations

As an organization that aims to prevent and reduce substance use harms for people living in Canada, this model was developed – and is primarily utilized – within a Canadian context. The initial stages of the model focus on establishing a thorough understanding of context and identifying the optimal role and response on the basis of local and relevant factors. Because of this, the model could be adapted for use in other countries or cultural contexts. It is worth noting, however, that the existing KM models, frameworks and theories that informed the creation of this model, and the structures within which our organization is situated, largely reflect western perspectives. If used in different contexts, critical reframing may be required to apply relevant aspects of this model while integrating different ways of knowing, sharing of wisdom and knowledge and utilizing knowledge to create

change within systems, communities and individuals' lives.

We acknowledge that we experience practical challenges that affect our ability to fully implement this approach consistently. These limitations include a continuous need to evaluate, adapt and evolve processes on the basis of partner feedback. These resource-intensive efforts require ongoing contributions from our partners in SUH care settings who are chronically underfunded and understaffed and often do not have the capacity to support continuous improvement or data collection to inform our impact. One strategy we use to support our partner organizations is facilitating communities of practice (for example, National Drug Checking Community of Practice) and hosting regular meetings of these groups. In this way, organizations working to address similar challenges can learn from one another and build on the strengths of each other without having to recreate new knowledge, resources or processes that have already been developed elsewhere. We also mitigate these challenges by creating toolkits, online forms and national guidance/best practices documents so that CCSA's reach can scale and spread even when partners do not have dedicated resources to move these pieces forwards. Another barrier is competing priorities which can limit our own capacity to actively support implementation and limit resource allocation for relationship management. Addressing SUH requires a holistic understanding of policy, health, social and enforcement sectors as well as the interplay amongst these worlds. Additionally, CCSA's scope encompasses both regulated and unregulated substances across multiple drug classes that have varying effects and responses that are unique to each. We have networks of partners across Canada and internationally that specialize within all these facets. Here, CCSA relies on the strength of our partnerships and utilizes a network of networks to stay informed about emerging issues and innovative responses. For example, we host the Canadian Community Epidemiology Network on Drug Use, a nationwide network with nodes of community partners who share drug trends and associated issues. By coordinating these community partners and assembling the information they report, we not only maintain a pulse on critical issues but also share back to communities a consolidated picture of SUH trends and lessons learned in response to local drug issues. Finally, a changing political landscape can make certain issues more pressing for our organization at differing times. To illustrate, leading up to the legalization of cannabis in Canada in 2018, it was critical for us to focus our efforts on establishing (a) an evidence base of what was known about the substance and its effects on individuals and communities, (b) policy areas that needed to be monitored post-legalization and (c) a research agenda for ongoing evaluation. This type of challenge is more difficult to anticipate as municipal, jurisdictional and federal policies can all be shifting in multiple directions at the same time. As SUH exists within a continuously evolving landscape, we have intentionally set understanding context and defining CCSA's role as the foundational components at the outset of this model to be continuously responsive to emerging needs across the country. As CCSA navigates each emerging need, we are committed to learning and revising our approach.

Conclusions

Our model represents the way CCSA prioritizes the diverse voices and expertise of the people we serve as we lead the development and mobilization of evidence in the SUH field. Our approach illustrates the need to be nimble; to respond and adapt to context, emerging priorities, partners' needs and the rapidly evolving landscape of SUH.

Building partnerships and engaging with partners with distinct perspectives and experiences (for example, First Nations, Métis and Inuit, other equity-deserving groups, those with lived experience of substance use and people living in rural and remote settings) throughout our processes is an integral component of our approach. Our goal is to ensure greater uptake of evidence and knowledge by the healthcare system, providers and users; ultimately, we aim to improve health equity. Our model also responds to the need for coordinated, collective and intersectoral action to achieve meaningful impact. We hope this model offers a template for others as an outline of the KM considerations that could enhance their approach to partnership engagement and advance their work towards impactful evidence-based health programs, practices and policies.

Abbreviations

CCSA	Canadian Centre on Substance Use and Addiction
FNIM	First Nations, Inuit and Métis
KM	Knowledge mobilization
SUH	Substance use health

Author contributions

S.T. lead the development of the integrated knowledge mobilization model and was a major contributor to the writing of the manuscript. S.W. and C.S. provided feedback for revisions of the integrated knowledge mobilization model and were major contributors to the writing of the manuscript. E.H., D.P. and M.H.B. contributed to the manuscript conceptualization and provided revisions to the manuscript. All authors read and approved the final manuscript.

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Availability of data and materials

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Declarations

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Not applicable.

Consent for publication
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Competing interests
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