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Implementation of harm reduction services for people who use drugs provided by pharmacy staff: a scoping review protocol

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ABSTRACT

Introduction The disparities and risk trajectories experienced by people who use drugs (PWUD) highlight the critical need for equity-oriented strategies. Pharmacy staff (pharmacists, pharmacy technicians and assistants) make essential contributions to public health, and their role in the response to the drug overdose crisis can be understood as an extension of their public health role. Their involvement in overdose prevention strategies, such as take-home naloxone programmes and prescribed opioid medication management, has been documented. Still, their role in harm reduction services for PWUD has yet to be mapped. This gap has led to challenges when implementing harm reduction services in pharmacy-related settings. This review aims to summarise literature that focuses on the implementation of harm reduction services for PWUD provided by pharmacy staff.

Methods and analysis This scoping review will adhere to the Arksey and O'Malley framework for conducting scoping reviews. The electronic databases MEDLINE, Embase, CINAHL, Web of Science Core Collection, SCOPUS and Google Scholar were searched on 4 June 2024, using terms related to pharmacy staff, PWUD and harm reduction services. This review will consider peer-reviewed literature in English, Spanish and French focused on describing or evaluating the implementation of harm reduction services for PWUD by pharmacy staff. Two independent reviewers will screen titles and abstracts and conduct the full-text screening to determine eligibility. Findings will be presented as a narrative summary and supported by tabular and graphical formats. Knowledge partner engagement will guide all steps in this study.

Ethics and dissemination Formal ethical approval is not required, as primary human or animal data will not be collected. A manuscript summarising the results will be written and submitted to a peer-reviewed journal for publication. Other outlets for dissemination will include local presentations and conference presentations.

Trial registration details Open Science Framework (https://osf.io/vn6ht).

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ The systematic and comprehensive approach of this review will permit an extensive map of existing literature on the implementation and outcome evaluation of harm reduction and overdose prevention services delivered by pharmacy staff for people who use drugs.
⇒ This scoping review will follow the Arksey and O'Malley framework to ensure a systematic approach to searching, screening and reporting.
⇒ A comprehensive search strategy, developed in collaboration with a medical librarian and peer-reviewed by another medical librarian, has been designed to enhance the breadth and quality of the search.
⇒ Following scoping review guidelines, a quality appraisal of sources will not be performed.
⇒ This work is framed by an integrated knowledge translation approach that engages knowledge partners as active team members in co-creating knowledge.

INTRODUCTION

Despite substantial efforts in drug overdose prevention, the number of people affected by drug-related harms continues to increase at unprecedented rates around the world.[1] In 2019, drug use was associated with about 600 000 deaths worldwide, and almost 80% of these were attributed to opioid use, including those illicitly cultivated and manufactured.[2] The USA and Canada are two countries significantly impacted by opioid-related deaths and harms. In the USA, the latest available data indicate that more than 100 000 people died of drug-related overdoses in 2022,[3 4] and approximately 1 of every 80 visits to the emergency department across 2016–2017 were opioid-related.[5] The impacts of this crisis expand beyond affecting the health and well-being of people who use drugs (PWUD); 1 in 8 adults have had their lives disrupted by drug overdose-related deaths of people they knew.[6] In 2023, an estimated 22 people died daily due to apparent opioid toxicity, and there were 78 opioid-related poisoning emergency

department visits per day on average in Canada.[7] While many factors contribute to overdose risk, the primary contributor to escalating mortality in these countries has been an increasingly volatile and unpredictable drug supply associated with illicitly manufactured fentanyl and other novel synthetic drugs.[3 7]

Additionally, social and structural factors influence the potential risk at each stage of the drug use continuum.[8] For example, Indigenous communities,[3 9] as well as unstably housed individuals,[10 11] exhibit disproportionately higher rates of substance use indicators compared with their counterparts. Meanwhile, women and other gender minorities confront unique social and health contextual factors that challenge their substance use and recovery journeys.[12] Moreover, socioeconomic factors, such as employment rates,[13 14] income[13–15] and intergenerational income mobility rates,[16] have been described as factors influencing substance use and overdose deaths. The disparities and risk trajectories experienced by PWUD underscore the critical need for equity-oriented strategies that also address the underlying determinants of health.[17]

A public health approach to substance use moves beyond a focus on individual-level aetiology. It addresses the influence of several factors, including social, structural, economic and environmental determinants that contribute to drug-related harm. It situates substance use within a spectrum, acknowledging the potential benefits and harms of use.[18] As part of this pragmatic response and as an alternative to a criminalised model of substance use, harm reduction is 'an evidence-based, client-centred approach that seeks to reduce the health and social harms associated with addiction and substance use, without necessarily requiring people who use substances to abstain or stop'[19] substance use. It encompasses a variety of programmes, services and practices grounded in justice and human rights that aim to meet people where they are. Harm reduction is a set of principles, a philosophy of care, and a social justice movement that advocates for the rights of PWUD.[20] In the context of drug use, some strategies incorporating a harm reduction approach include the provision of sterile supplies, overdose intervention, education on safer consumption, medication for opioid use disorder and referrals to support and services.[19 20]

As part of the primary healthcare system, pharmacy staff (including pharmacists, pharmacy technicians and assistants) make essential contributions to public health responses, such as immunisation campaigns,[21] health promotion[22] and provision of essential services during disasters and emergencies, such as screening tests, medicine supply and emergency prescribing.[23 24] They are among the most accessible healthcare providers with a broad scope of practice in many jurisdictions. Pharmacy staff are integral to multidisciplinary teams in diverse healthcare settings,[25] and pharmacies are conveniently located, offer extended hours and are an access point to a wide range of services.[26] Enhancing the range of services provided by pharmacy staff could improve the well-being of communities, increase the availability of healthcare services and alleviate financial burdens on the healthcare system.[27] Therefore, their role in the response to the drug overdose crisis and in reducing the harms of stigma and overdose can be understood as an extension of their public health role.[28]

Recent reviews have summarised the literature on some community pharmacy-based harm reduction services, for example, take-home naloxone interventions,[29] methadone treatment for opioid use disorder and pharmacy dispensing[30] and non-prescription naloxone accessibility in community pharmacies in the USA.[31] A previously published systematic review also appraised the evidence on the effectiveness of pharmacy-based syringe exchange programmes, concluding that these showed to be effective in reducing risk behaviours among PWUD.[32] These works are limited to specific strategies, generally focusing on the results of legal approaches and government policies, not comprehensive interventions developed to address the needs and challenges of PWUD to access healthcare. Nonetheless, a clear emphasis on the implementation process and harm reduction as a philosophy of care is missing. These reviews are not the result of a systematic mapping of the literature across harm reduction services provided by pharmacy staff to PWUD, which also include dispensing buprenorphine,[33] drug checking services[34] and providing sexually transmitted and bloodborne infections treatment.[35] This gap has led to challenges when pharmacy staff and decision-makers consider implementing harm reduction strategies for this population. Therefore, one area of pharmacy practice research that has yet to be examined systematically is the implementation of diverse harm reduction services for PWUD by pharmacy staff.

Given the current emphasis and growing body of evidence supporting the need for equity-oriented and culturally safe responses to address the health needs and priorities of PWUD, a careful mapping of the implementation of interventions taking a harm reduction approach and their related outcomes is necessary to support pharmacy education, practice, policy and research. Guided by implementation science principles, we will examine and summarise the literature in this field. These findings have the potential to contextualise the available literature, guide pharmacy practice and research in a common direction, and support a patient-oriented research agenda.

METHODS AND ANALYSIS

The work has been structured around the five stages of the framework recommended by Arksey and O'Malley[36] and enhanced by Levac *et al*:[37] (1) identifying the research question, (2) identifying relevant studies, (3) study selection, (4) charting the data and (5) collecting, summarising and reporting the results. The proposed scoping review will be conducted following the Preferred Reporting Items of Systematic reviews and Meta-Analyses for Scoping Reviews (PRISMA-ScR)

checklist.[38] This scoping review has been registered on The Open Science Framework registries (https://osf.io/vn6ht).

An integrated knowledge translation approach will be used throughout the review, working with knowledge partners who have lived experiences related to the topic of this review.

Stage 1: Identifying the research question

This scoping review seeks to answer the following research question: *What evidence exists on the implementation of harm reduction services for PWUD provided by pharmacy staff (pharmacists, pharmacy technicians, pharmacy assistants)?* The subquestions of this review include:

1. What harm reduction services for PWUD have been implemented by pharmacy staff?
2. What is the role of pharmacy staff in the provision of harm reduction services for PWUD?
3. What outcomes (implementation or service) of harm reduction services for PWUD provided by pharmacy staff have been reported?
4. What are the demographic characteristics of PWUD accessing harm reduction services provided by pharmacy staff?
5. Are harm reduction services for PWUD provided by pharmacy staff tailored to address the needs and priorities of equity-deserving populations? (eg, women, Indigenous persons, racialised groups, LGBTQ2S+)

Stage 2: Identifying relevant studies

Information sources

The databases to be searched include MEDLINE (Ovid), Embase (Ovid), CINAHL with Full Text (EBSCOhost), Web of Science Core Collection (Clarivate), SCOPUS and Google Scholar.

Search strategy

The medical librarian (JYK) developed and executed the search strategy in collaboration with team members, using an iterative process to capture published articles in peer-reviewed journals. The MEDLINE search was peer-reviewed by a second medical librarian before being translated into other databases. Additional papers will be obtained by screening the reference lists of articles selected for full-text review. In addition to subscription databases, the research team will review the first 200 results from Google Scholar for inclusion, which has been demonstrated to be a reasonable number of results to screen since there is a high overlap between Web of Science and Google Scholar.[39]

This study will use a comprehensive search strategy that employs keywords and subject headings, where applicable, related to the three overarching themes of 'pharmacy', 'substance use' and 'harm reduction'. The search terms will be adapted for each database. The full Ovid MEDLINE search strategy is available in online supplemental material 1.

Stage 3: Study selection

Eligibility criteria

This stage will be considered an iterative process involving searching the literature, refining the search strategy and reviewing articles for study inclusion. This scoping review will include peer-reviewed articles published in English, Spanish or French from inception to 2024 describing harm reduction and overdose prevention services for PWUD delivered by pharmacy staff. We will limit our search to sources that describe the implementation of harm reduction services for PWUD by pharmacy staff and related outcomes. Sources focused on interventions addressing harms related to the use of regulated substances, such as tobacco, alcohol or cannabis and others describing opioid stewardship interventions, which are designed to improve, monitor and evaluate medical use and avoid potential misuse of prescription opioids (such as for the treatment of acute and chronic pain)[40] will be excluded. Complete eligibility criteria are presented in table 1.

Participants

This scoping review will consider pharmacy staff who provide care for PWUD as part of pharmacy-only or interdisciplinary teams. People of any race/ethnicity, gender and age will be included.

Concept

Any service, programme or intervention strategy implemented that contemplates the delivery of harm reduction services for PWUD by pharmacy staff.

Context

Any pharmacy staff providing care in any healthcare setting and country will be considered. This may include community pharmacies, hospital or clinic settings, outpatient pharmacies, long-term care facilities and outreach teams (eg, in partnership with community organisations).

Type of sources

This scoping review will include peer-reviewed experimental, quasiexperimental and observational study designs. Qualitative and mixed-methods studies will also be included. Commentaries, editorials, opinion pieces, case reports and case series will be excluded. The reference lists of any evidence syntheses identified by our search will be reviewed for relevant articles.

Source of evidence selection

All studies identified in the search will be uploaded into the Covidence software (Veritas Health Innovation, Melbourne, Australia). Duplicated articles will be removed through the automated system within Covidence. Articles will be screened in two phases. First, two team members will independently screen titles and abstracts of studies for eligibility. Reviewers will meet at the beginning, midpoint and final stages of the abstract review process to discuss challenges and uncertainties related to study selection. Next, two members will review the full text of articles identified as potentially relevant and record reasons for

Table 1 Eligibility criteria

Aspects of study design	Eligibility criteria
Population	PWUD from any country. People of any race/ethnicity, gender and age will be included.
Intervention	Harm reduction services for PWUD provided by pharmacy staff as part of pharmacy-only or multidisciplinary implementations. Studies considering direct interaction between pharmacy staff and PWUD will be included. Studies focused on interventions addressing harms related to the use of tobacco, alcohol, or cannabis, opioid stewardship and those describing and evaluating policy and legislative changes will be excluded.
Outcome	Description and/or evaluation of outcomes associated with the implementation of harm reduction services provided to PWUD by pharmacy staff. Outcomes include:[41 42] ► Implementation: acceptability, adoption, appropriateness, cost, effectiveness, feasibility, fidelity, implementation, maintenance, reach, penetration and sustainability. ► Service: efficiency, safety, effectiveness, equity, patient-centredness and timeliness.
Setting	Any setting.
Provider	Pharmacy staff (pharmacists and residents, pharmacy technicians and pharmacy assistants). People of any race/ethnicity, gender and age will be included.
Study design	Qualitative, mixed methods and quantitative. Randomised control trials, descriptive studies (retrospective, cross-sectional or prospective), comparative and non-comparative studies.
Year	Inception-2024.
Language	English, Spanish or French.

PWUD, people who use drugs.

exclusion. Discrepancies will be discussed between the two reviewers and with a third team member (EH) if needed until a consensus is reached. The results will be reported according to the PRISMA-ScR guidelines.[38]

Stage 4: Charting the data

A data extraction report will be developed in Microsoft Excel (Microsoft Corporation, Washington, USA) to record essential information in the articles that are included. The report form will be piloted by two team members to ensure that all relevant results are extracted. Two team members will independently extract data from the same three articles in order to refine and finalise the variables required for data extraction. They will then review their results and discuss any discrepancies until a consensus is reached for all included articles. Data will be extracted by one team member and reviewed by a second member for accuracy. If required, a third team member (EH) will be consulted to make the final decision.

The preliminary data extraction report includes (1) general study characteristics (authors, year published, country of origin, study design and research objectives); (2) context characteristics (healthcare setting and location (urban vs rural)); (3) population characteristics; (4) implementation characteristics (type of harm reduction service, pharmacy staff involved, pharmacy staff role) and (5) outcomes (implementation, service). The variables included in the report will be iteratively updated to enable the capturing of all relevant data to answer the research questions. Modifications will be documented, and the final list of variables will be included in the full scoping review.

Stage 5: Collating, summarising and reporting the results

Tables and figures will summarise and report the extracted data. A descriptive analysis will be performed to answer the research questions, including a numerical overview of the amount, type of research study design, distribution of included articles and a narrative synthesis. Sources will be grouped and synthesised by the type of harm reduction services and healthcare settings uncovered in the scoping review. Characteristics of publications and critical findings will be reported. Implications for future pharmacy practice, research and policy will be discussed.

The planned timeline for this scoping review is to complete the title and abstract screening by the end of July 2024, full-text screening by August 2024, and data extraction and analysis by November 2024. The team will aim to have a report finalised for submission to knowledge partners by December 2024 and a manuscript finalised and submitted for publication by March 2025.

Patient and public involvement

This team includes a community partner with a nursing background and experience as the manager of a harm reduction programme part of a local community services organisation (MT) and a health system partner with experience as a clinical pharmacist and consultant in the provincial health service authority's addiction and mental health portfolio (ES).

The approach taken for this project includes strategies for sustaining meaningful engagement of partners throughout the process. Partners provided feedback on the design and manuscript writing of this scoping review

protocol, including developing the research questions and eligibility criteria that target their context.

One primary goal of this integrated approach is to incorporate partners' expertise. Regular email communications and team meetings will continue to discuss progress and priorities, reach consensus and determine the next steps. Partners will be involved in all stages of this study (1–5) to shape its development, including the iterative revision of eligibility criteria, interpretation of findings and creation of the knowledge mobilisation plan.

As part of the knowledge mobilisation plan, findings will be shared with the public, community partners, academics and decision-makers at local and international events. The outputs for this work will be decided as a team and in consultation with partners.

ETHICS AND DISSEMINATION

This scoping review study does not involve animal or human study participants, so research ethics approval will not be required.

As the study unfolds, dissemination activities may include local presentations and generating community reports. Through targeted strategies, findings will also be shared with pharmacy regulators in Canada. This review is expected to be submitted as a manuscript in a relevant peer-reviewed scientific journal for publication. Other outlets for dissemination may include local presentations (academic and non-academic) and conference presentations. The knowledge mobilisation plan includes developing a summary of findings to be distributed to pharmacy decision-makers and community partners. During the results stage, all partners are expected to be engaged to co-develop the plan and plain-language communications.

This review will examine and summarise the implementation and outcomes of harm reduction services for PWUD provided by pharmacy staff. It will also illustrate how the role of pharmacy staff in providing harm reduction services for PWUD varies across jurisdictions. This study will highlight the implementation of services and reported outcomes from the perspective of harm reduction as a philosophy of care necessary to support pharmacy education, practice, policy and research emphasising people-centred care.

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Contributors JN conceived the idea for the scoping review and the eligibility criteria with input from EH. JN and JYK constructed the search strategy and JYK developed and executed the final search strategy in collaboration with team members. JN drafted the scoping review protocol with input from all authors. JN, CH, JYK, ES, MT and EH contributed to critically reviewing subsequent drafts and approved the protocol prior to its submission. JN is the guarantor of this study.

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