McMaster University | HEALTH FORUM

Rapid Synthesis Appendices

Examining pharmacist interventions for supporting individuals with substance-use disorder

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Appendix 1: Methodological details

Background to the rapid synthesis

This rapid synthesis mobilizes both global and local research evidence about a question submitted to the McMaster Health Forum's Rapid Response program. Whenever possible, the rapid synthesis summarizes evidence drawn from existing evidence syntheses and from single research studies in areas not covered by existing evidence syntheses and/or if existing evidence syntheses are old or the science is moving fast. A systematic review is a summary of studies addressing a clearly formulated question that uses systematic and explicit methods to identify, select and appraise research studies, and to synthesize data from the included studies. The rapid synthesis does not contain recommendations, which would have required the authors to make judgments based on their personal values and preferences.

The Forum produces timely and demand-driven contextualized evidence syntheses such as this one that address pressing health and social system issues faced by decision-makers (see our website for more details and examples). This includes evidence syntheses produced within:

- days (e.g., rapid evidence profiles or living evidence profiles)
- weeks (e.g., rapid syntheses that at a minimum include a policy analysis of the best-available evidence which can be requested in a 10-, 30-, 60- or 90-business-day timeframe)
- months (e.g., full evidence syntheses or living evidence syntheses with updates and enhancements over time).

This rapid synthesis was prepared over a 30-business day timeframe and involved five steps:

1) submission of a question from a policymaker or stakeholder (in this case, the Ministry of Health in British Columbia)
2) identifying, selecting, appraising and synthesizing relevant research evidence about the question
3) conducting and synthesizing a jurisdictional scan of experiences about the question from other countries and Canadian provinces and territories
4) drafting the rapid synthesis in such a way as to present concisely and in accessible language the research evidence
5) finalizing the rapid synthesis based on the input of at least two merit reviewers.

Identification, selection, quality appraisal and synthesis of evidence

For this rapid synthesis, we searched Health Systems Evidence and PubMed for:

1) guidelines (defined as providing recommendations or other normative statements derived from an explicit process for evidence synthesis)
2) evidence syntheses
3) protocols for evidence syntheses that are underway
4) single studies (when no guidelines or evidence syntheses are identified or when they are older).

In Health Systems Evidence, we searched for evidence syntheses by combining filters for 'mental health and addictions' under diseases and for 'pharmacists' under providers. In PubMed, we searched for (substance use disorder OR drug misuse OR addiction OR drug abuse OR substance use OR substance dependence OR (Substance-Related

Disorders[MeSH Major Topic]) OR (Substance-Related Disorders[MeSH Terms])) AND (pharmacist), with a date limit of the previous five years.

Each source for these documents is assigned to one team member who conducts hand searches (when a source contains a smaller number of documents) or keyword searches to identify potentially relevant documents. A final inclusion assessment is performed both by the person who did the initial screening and the lead author of the rapid synthesis, with disagreements resolved by consensus or with the input of a third reviewer on the team. The team uses a dedicated virtual channel to discuss and iteratively refine inclusion/exclusion criteria throughout the process, which provides a running list of considerations that all members can consult during the first stages of assessment.

For any included guidelines, two reviewers assess each guideline using three domains in the AGREE II tool (stakeholder involvement, rigour of development and editorial independence). Guidelines are classified as high quality if they were scored as 60% or higher across each of these domains.

For each evidence synthesis we included, we documented the dimension of the organizing framework (see Appendix 2) with which it aligns, key findings, living status, methodological quality (using AMSTAR), last year the literature was searched (as an indicator of how recently it was conducted), availability of GRADE profile and equity considerations using PROGRESS PLUS.

For AMSTAR, two reviewers independently appraise the methodological quality of evidence syntheses that are deemed to be highly relevant. Disagreements are resolved by consensus with a third reviewer if needed. AMSTAR rates overall methodological quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. High-quality evidence syntheses are those with scores of eight or higher out of a possible 11, medium-quality evidence syntheses are those with scores between four and seven, and low-quality evidence syntheses are those with scores less than four. It is important to note that the AMSTAR tool was developed to assess evidence syntheses focused on clinical interventions, so not all criteria apply to those pertaining to health-system arrangements or to economic and social responses. Where the denominator is not 11, an aspect of the tool was considered not relevant by the raters. In comparing ratings, it is therefore important to keep both parts of the score (i.e., the numerator and denominator) in mind. For example, an evidence synthesis that scores 8/8 is generally of comparable quality to another scoring 11/11; both ratings are considered 'high scores.' A high score signals that readers of the evidence synthesis can have a high level of confidence in its findings. A low score, on the other hand, does not mean that the evidence synthesis should be discarded, merely that less confidence can be placed in its findings and that it needs to be examined closely to identify its limitations. (Lewin S, Oxman AD, Lavis JN, Fretheim A. SUPPORT Tools for evidence-informed health Policymaking (STP): 8. Deciding how much confidence to place in a systematic review. *Health Research Policy and Systems* 2009; 7 (Suppl1): S8.)

For primary research (if included), we documented the dimension of the organizing framework with which it aligns, publication date, jurisdiction studied, methods used, a description of the sample and intervention, declarative title and key findings, and equity considerations using PROGRESS PLUS. We then used this extracted information to develop a synthesis of the key findings from the included syntheses and primary studies.

During this process we include published, pre-print and grey literature. We do not exclude documents based on the language of a document. However, we are not able to extract key findings from documents that are written in languages other than Chinese, English, French, Portuguese or Spanish. We provide any documents that do not have content available in these languages in an appendix containing documents excluded at the final stages of reviewing. We excluded documents that did not directly address the research questions and the relevant organizing framework. All of the information provided in the appendix tables was taken into account by the authors in describing the findings in the rapid synthesis.

Identifying experiences from other countries and from Canadian provinces and territories

For each rapid synthesis, we work with the requestors to collectively decide on what countries (and/or states or provinces) to examine based on the question posed. For other countries, we search relevant government and stakeholder websites including those of ministries of health to identify any relevant strategies related to substance use, as well as colleges of pharmacists and other regulatory bodies. In Canada, a similar approach was used, which involved searching the websites of colleges and associations of pharmacists as well as websites of mental health and addictions organizations such as the Canadian Centre on Substance Use and Addiction. While we do not exclude content based on language, where information is not available in English, Chinese, French or Spanish, we attempt to use site-specific translation functions or Google translate. A full lit of websites and organizations searched is available upon request.

Appendix 2: Framework to organize what we looked for

We used the framework below to categorize each of the evidence documents included in the rapid synthesis and to structure the presentation of findings in the rapid synthesis and appendices 2 and 3.

- For what types of substances
  - Alcohol
  - Cannabis
  - Opiates
  - Stimulants
  - Sedatives (e.g., benzodiazepines)
  - Tobacco
  - Nicotine (e.g., vaping or 'tobacco-free' products)
  - Injected substances (unspecified type)
  - Other
- In what settings
  - Community pharmacies
  - Other community-based settings (e.g., primary-care offices)
  - Acute care settings
- Using what interventions/approaches
  - Patient education and supporting self-management
  - Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
  - Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies
  - Drug safety monitoring including point-of-care testing/laboratory testing
  - Screening, brief intervention (or de-escalation) and referral to treatment (SBIRT)
  - Withdrawal management
  - Motivational interviewing
  - Drug delivery, outreach or mobile pharmacy services
  - Witnessing or supervising dose ingestion or administration including supervised injection/consumption sites
  - Contingency management
  - Opioid stewardship
- Using what mode of delivery
  - In-person
  - Virtual
- Using what type of remuneration
  - Fee for service
  - Capitation
  - Global/block funding
  - Salary
  - Episode-based payment
  - Targeted payments/penalties
- Outcomes
  - Health outcomes
    - Mortality
    - Substance use
    - Hospitalization
  - Care experiences
    - Access to care
    - Retention in treatment
    - Patient satisfaction
  - Provider experience
  - Costs

Appendix 3: Key findings from highly relevant evidence documents on pharmacist interventions for support individuals with substance-use disorder

For what substance and for which intervention	Alcohol	Opiates	Tobacco
Patient education and supporting self-management			*Health outcomes* • One recent single study from Canada found intensive pharmacist-delivered smoking cessation programs reduced smoking behaviour, with no significant difference in abstinence rates reported between the original and abbreviated versions (1) *Provider experiences* • One recent single study from the U.S. highlighted that although most community pharmacists believed it was their role to provide tobacco cessation education and advice, they were often limited by a lack of time and reimbursement (2) *Costs* • One recent single study from Canada estimated cost per quit from an intensive tobacco reduction program run by pharmacists to be between $1,217 and $1,420 (1)
Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution		*Health outcomes* • One recent medium-quality evidence synthesis found community pharmacy–based take-home naloxone programs are effective at reducing overdose among community members, but they need to take into consideration time constraints for education and adequate reimbursement of pharmacists' time (3) • One recent medium-quality evidence synthesis found naloxone services provided in Veteran's affairs centres and within acute care settings improved the identification of at-risk patients, education efforts and recipients' attitudes and knowledge (4) *Care experiences* • Two recent single studies from the U.S. found little broad adoption of community-based naloxone programs, with a significant barrier being high out-of-pocket costs and stigma-related factors (5; 6) • One recent single study found education mail campaigns followed by a phone call was more effective at increase	

For what substance and for which intervention	Alcohol	Opiates	Tobacco
		acceptance rates and accessibility of naloxone kits than educational campaigns alone (7) • One recent single study found community pharmacists' dispensing naloxone improved patients' access (8) • One single study found that the introduction of intranasal naloxone and the removal of healthcare requirements substantially increased pharmacy-based naloxone dispensing, particularly among high-risk individuals (9) • One recent single study found that, while pharmacy-based naloxone distribution was generally supported, enhancing privacy and incorporating opt-out programs could optimize accessibility (10) *Provider experiences* • One recent medium-quality, two recent low-quality evidence synthesis and one single study from the U.S. found pharmacists generally had positive attitudes towards increased practice responsibilities for patients at risk of an opioid overdose, including distributing naloxone o Supports that could further help pharmacists include a standing order for naloxone, mandatory consultation for opioid prescribed patients (and associated remuneration), additional education and training about how to integrate naloxone and buprenorphine dispersion into patient counselling and existing workflow (11-14) o One of the recent low-quality evidence syntheses found that, though most states permitted pharmacist dispensing of naloxone, they were often underutilized without programs to support their roles (13) • Three recent single studies found pharmacist hesitancy to provide access to non-prescription syringes and naloxone stemmed largely from a lack of education on overdose and substance use stigma (15-17)	
Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies	*Care experiences* • One single study found increased access to alcohol relapse prevention medication when provided by a community pharmacist and suggested service users	*Health outcomes* • Mixed effects were reported in one single study of a pharmacist-provided opioid tapering support program in which most patients reported a lower dose of opioid use, but some noted increased pain and a lower quality of life resulting from the tapering	*Health outcomes* • One recent high-quality evidence synthesis, one recent medium-quality evidence synthesis and one older medium-quality evidence synthesis found mixed effects from tobacco cessation efforts using nicotine replacement therapies delivered by pharmacists in

For what substance and for which intervention	Alcohol	Opiates	Tobacco
	could benefit from pharmacist-led telephone intervention to improve the use of the medication (18)	○ Suggested changes to the program include more outreach and the inclusion of other types of care providers (e.g., behavioural health specialists) (19) • One single study from the U.S. found that community pharmacists administering and dispensing methadone reduced substance use ○ Barriers to this service include difficulty monitoring patients across pharmacies, challenges with record-keeping, and insufficient resources within pharmacies (20) • One recent study from Canada found patients who filled their prescription at on-site pharmacies demonstrated higher one-year retention rates compared to those that filled their prescriptions in community, off-site pharmacies (21) *Care experience* • Three single studies from the U.S. and one single study from New Zealand found pharmacist administration of methadone increased access to care for those with opioid-use disorder, but noted that the pharmacy can be a stigmatizing setting (20; 22-24) ○ One of the single studies noted that electronic prescribing and pharmacy pick-up was an appreciated option for those with take-home doses and transportation challenges (24) *Provider experiences* • One recent low-quality evidence synthesis and one single study found education programs, even when delivered virtually, providing information on opioid-use disorder, prescribing procedures and ways to communicate with patients improve pharmacists' confidence in dispensing buprenorphine (25) • One recent study from Canada reported that pharmacists felt confident in an expanded role, which included prescribing methadone and providing naloxone counselling (26) • Two recent single studies found stigma, high costs, lack of stock in pharmacies and protocol gaps were barriers for community pharmacist dispensing of buprenorphine (27) *Costs* • One single study from the U.S. found pharmacist administered and dispensed methadone service was cost-effective compared to opioid treatment programs (20)	community settings, with effectiveness ranging from 4–77% (28-30)

For what substance and for which intervention	Alcohol	Opiates	Tobacco
Drug safety monitoring including point-of-care testing/laboratory testing			
Screening, brief intervention (or de-escalation) and referral	*Health outcomes* • One older medium-quality review found little effect from community pharmacy–based screening and brief intervention for alcohol dependence at 12 weeks (29)	*Provider experiences* • One recent low-quality evidence synthesis identified 12 tools that can be used in community pharmacies to support screening, outpatient intervention referral and naloxone kit dispersion ○ However, the synthesis notes that growing utilization of mail order and central fill pharmacies is challenging the effectiveness of in-person screening (31)	
Withdrawal management			
Witnessing or supervising dose ingestion or administration including supervised injection/consumption sites			
Contingency management			
Opioid stewardship		*Health outcomes* • One recent medium-quality review found opioid stewardship programs, and particularly those with an educational component, were generally associated with a reduction in opioid use and enhanced knowledge among opioid users (32)	

Appendix 4: Key findings from highly relevant jurisdictional experiences on pharmacist interventions for supporting individuals with substance-use disorder

Jurisdiction	Description of pharmacist interventions

Australia	• Each state in Australia has a separate role in opioid-dependent therapy programs; in general community pharmacies must register with their Ministry of Health and ensure pharmacists have the appropriate accreditation to supply methadone or buprenorphine, including long-acting injectable buprenorphine.
	  ○ Permitted pharmacies can serve up to 65 patients, though patients considered stable who must go to the pharmacy only once a week for their doses are not counted in this limit.
	  ○ Specific states differ in their rules around take-home amounts, in Victoria for patients receiving replacement therapies for three to six months may take up to two take-home doses per week compared to only one in Western Australia for patients that have been receiving replacement therapy for more than six months.
	  ○ Though the medication is covered by Medicare the pharmacy services aren't, and patients pay out of pocket for these costs, estimated to be $110 AUS for 28 days of care.
	• Other approaches to support opioid-use disorder include hosting a take-home naloxone program (and associated training) and/or a needle and syringe program, providing self-care cards that provide information for individuals on drug overdose, methadone and buprenorphine, and safe injection practices as well as links to further resources and when individuals should seek medical attention.
	• Similar to opioid dependence, pharmacists in Australia can undertake additional training focused on alcohol-use disorders that supports providing brief intervention support as well as providing self-care cards.

Finland	• No information identified.

France	• In the 1990s, France began to scale-up buprenorphine, allowing any physician to prescribe it without special licensing or training
	  ○ Physicians actively collaborated with pharmacists, who provide daily, supervised dosing of buprenorphine.
	  ○ After the policy was implemented in 1995, heroin overdoses were reduced by 79% over the next four years.
	• France's national strategy to prevent opioid overdoses includes efforts to make information about opioid analgesics more available to the public, especially through community and hospital pharmacists.
	  ○ The plan also involves efforts to improve monitoring, alert and response systems, of which pharmacists play an important role.
	• Naloxone is available in pharmacies in France without a medical prescription and can be accessed for free in hospitals and addiction centres.

New Zealand	• Pharmacists in New Zealand are encouraged to provide screening and brief interventions for alcohol by having open discussions with patients and referring them to community resources. • Pharmacists in New Zealand can provide advice and support on choosing nicotine replacement therapies to help quit smoking. • Many pharmacies in New Zealand provide a range of injecting equipment and harm reduction advice to support those who inject drugs. • Naloxone nasal sprays are available for purchase at pharmacies without a prescription, but it is very expensive; injection-based naloxone is only available on prescription by contacting local alcohol and drug addiction support services. • Community pharmacists in New Zealand dispense and witness opioid substitution therapy and must work closely with a prescriber to ensure compliance with regulations.
Poland	• The Eurasian Harm Reduction association reported that as of 2017, needle and syringe exchange programs were distributed through specialised programs and not community-based pharmacies. • While opioid substitution therapy has been available since 1993, only public healthcare units and select non non-governmental organizations that have received permission from the governor of the province, in collaboration with the Ministry of Health, can deliver treatment. ○ During the pandemic, civil society started advocating for prescription-based substitution treatment, which would allow for distribution within pharmacies, we were unable to determine whether changes were made to existing drug laws.

Jurisdiction	Description of pharmacist interventions
	○ At the end of 2020, the Polish Drug Policy Network sent an appeal for the immediate resumption of work on the draft amendment to the Act on Counteracting Drug Addictions, which would extend the current model of substitution treatment to include using drugs prescribed by doctors through pharmacies rather than through the existing mechanism of substitution treatment programs (of which, in 2019, there were 25 across the country). • Despite the appeal, we were unable to confirm whether changes had been made to the Act on Counteracting Drug Addiction ○ While the National Health Programme 2021–25 describes efforts to expand harm reduction and opioid substitution treatment the exact details of how this will be accomplished were not provided.
Portugal	• The National Plan for the Reduction of Addictive Behaviours and Dependencies (2013–20) requires treatment interventions for drugs and psychoactive substances to be based on a comprehensive diagnosis of a person's full biopsychosocial needs. ○ An updated national plan has not been published. • Methadone maintenance treatment is available free of charge to all users and buprenorphine-based medications are available in pharmacies. • The National Health System covers 40% of the market price of buprenorphine-based medications.
United Kingdom	England • Methadone, buprenorphine and naltrexone can all be provided within community-based pharmacists with a prescription from a provider. ○ In early stages of treatment, patients are supervised to receive their doses by a pharmacist during which time the pharmacist checks in with the patient about their progress. ○ As the treatment progresses, individuals can pick up doses to take home and may receive medication for up to one week at a time. ○ Pharmacists in England are paid by salary. • A review of the approach conducted by Public Health England (now the U.K. Health Security Agency) note the important role that community pharmacies play in helping to reduce the extent of drug-related harms by promoting improved hygiene during intravenous drug use, encouraging the use of new needles and syringes and the safe disposal of equipment. The review notes that there is some evidence that exposure to needle and syringe programs (such as the ones run within pharmacies in England) are associated with reductions in HIV transmission among people who use drugs. Northern Ireland • A pharmacy needle exchange programme allows patients to pick up sterile injecting equipment and return used items. ○ It is intended to expand this program including establishing measurement of packs distributed per person with the aim of meeting the World Health Organization (WHO) target of 200,300 sterile needle and syringe sets distributed per person per year. ○ In addition to needle exchange, pharmacists also refer patients to appropriate services like addiction treatment and counselling centres and centres which carry out testing for blood-borne virus testing and hepatitis B vaccinations. Wales • Community prescribing for substance-use disorders can take place in a number of settings, one of which is supervised consumption sites within community pharmacies. ○ The number of patients receiving supervised consumption at each pharmacy is determined locally in line with local needs assessments. ○ The eligibility of pharmacists and designated pharmacy staff to participate in supervised consumption schemes is dependent on their completion of appropriate training. • Needle and syringe exchange sites operate within 217 community pharmacies within Wales, which provides sterile injecting equipment to local populations. ○ The proportion of individuals only attending pharmacy sites to receive equipment has increased over the last five years from 65 to 69 percent in 2021–22. Scotland • Community pharmacists play a key role in prescribing opioid substitution treatment and supervising consumption and may distribute naloxone to those who use drugs and their family members (including providing education and training on its use). ○ Community pharmacies and support hubs also provide clean injecting equipment and take back used equipment for safe disposal. ○ They may also be used to widen patient treatment options and location of treatment supply including providing long-acting buprenorphine and deprescribing of addictive medicines.

Jurisdiction	Description of pharmacist interventions
	• Pharmacists are encouraged to used high-risk medicine tools to identify harms or deterioration in patients taking these medicines. • A recent Royal College of Pharmacists report notes that some community pharmacists could be used as primary care public health and holistic care hubs by taking advantage of consultation rooms.

Jurisdiction	Description of pharmacist interventions
British Columbia	• As part of recent changes, pharmacists in British Columbia are able to prescribe nicotine cessation drugs so long as it is within the scope of their education and training. • In B.C., pharmacists and as of 2020, pharmacy technicians and assistances (when a pharmacist is unavailable) are allowed to deliver opioid agonist treatment following the prescription from a physician. o However, pharmacists are now empowered to use their own judgement to decide to deliver or to stop opioid agonist treatment and must keep the circle of care informed. • Pharmacists may transport opioid agonist treatment to individuals so long as a location is safe for both the patient and the pharmacist, is private, maintains confidentiality of the patients, and has a verifiable address. • The college of Pharmacists of B.C. requires that all registrants employed in a pharmacy providing services to have successfully completed the Opioid Agonist Treatment Compliance and Management Program for Pharmacy.
Alberta	• Pharmacists are eligible to provide tobacco cessation services, which can include prescribing pharmacotherapies. • Opioid Agonist Treatment must be prescribed by a physician and then can be filled and witnessed by a pharmacist at a registered pharmacy with a license to provide opioid agonist therapy. • Pharmacies providing this service must have suitable sound barriers to prevent unauthorized individuals from overhearing conversation, suitable visual barriers to maintain patient privacy and must maintain working hours that allow for witnessing administration or authorizing a take-home dose on select days that the pharmacy is closed. • Prescribers may consider offering take-home doses of buprenorphine once the opioid-use disorder has stabilized and/or when the benefits of take-home doses outweigh the risks. o For patients prescribed take-home buprenorphine, pharmacists should assess and document the social situation and environment of the individual and educate to ensure the patient understands how the product should be taken and stored. o Based on this assessment, regulated members may request that patients pick up, transport to and from the pharmacy, and store their take-home doses in a locked box or secured container if it is necessary for safety reasons. • Community pharmacists also provide harm reduction services including counselling on overdose prevention, including training of take-home naloxone, education regarding safe use of substances, referrals to opioid- and substance-use disorder treatment provider or program, and referral to other harm reduction services such as needle distribution programs.
Saskatchewan	• Pharmacists in Saskatchewan have the authority to prescribe medications for people who wish to quit smoking as well as offer guidance with over-the-counter nicotine-replacement therapy and provide education and support for self-management such as identifying social triggers and tactics for dealing with cravings. • Pharmacists in Saskatchewan are responsible for dispensing and witnessing opioid agonist therapy but must accommodate the needs of those requiring ingested medication. o Pharmacists must screen and assess the appropriateness of the treatment including the dose prescribed. o Pharmacists do not have the authority to adapt a prescription for opioid agonist therapy from daily witness to take-home dose. o Pharmacies must provide an area where a pharmacist can ensure privacy and confidentiality of patients during witnessed ingestion. o Take-home doses may be initiated once the patient has sufficient clinical stability, but patients must be reminded to safely store all take home doses and may be asked to pick up their doses using a lock box. o For methadone take-home doses should be limited to six days in succession unless in exception circumstances when up to 13 days can be provided. • Naloxone is available for purchase at pharmacies across Saskatchewan and in some communities; it is provided for free alongside training for its use.

Jurisdiction	Description of pharmacist interventions

Manitoba	• As of April 2022, pharmacists in Manitoba are compensated for smoking cessation assessment, counselling, follow-up and smoking cessation implementation strategies, including one-hour initial assessments and up to nine counselling sessions.
	  ○ In addition, patients are able to access up to $100 in product subsidy for prescribed first-line smoking cessation pharmacotherapy including over the counter nicotine-replacement products.
	• Prior to dispensing opioid agonist therapy, pharmacists in Manitoba are responsible for ensuring the appropriateness of the drug therapy, drug interactions, adverse reactions, therapeutic duplication, correct dosage and frequency and duration of administration.
	  ○ Patients may only receive prescriptions written for a maximum of up to three months, with dispensing to be authorized for no more than a month's supply of any opioid.
	  ○ Prescriptions for benzodiazepines and/or Z-drugs can only be written for a maximum of three months, with dispending to be authorized for not more than a one-month supply.
	• Pharmacists are responsible for dispensing and witnessing opioid agonist therapy following a pharmacist prescription.
	  ○ Pharmacists are not eligible to decide when patients are eligible for the take-home services, but pharmacists may be consulted in the process and may provide weekend carries if the pharmacy is not open on Sundays.
	  ○ Patients are required to place take-home prescriptions in a lock box, which may be covered once per patient per lifetime for the safe storage of take-home doses.
	  ○ Pharmacists should undertake drug monitoring as part of their work having occasional pill or carry bottle counts for patients.

Ontario	• The Ontario Pharmacy Smoking Cessation Program was launched in 2011 and is restricted to beneficiaries of the Ontario Drug Benefit program.
	  ○ Under this program pharmacies are remunerated for providing smoking cessation services upon submitting a product identification number.
	  ○ Services include one week consultation/program enrolment per year, up to three primary follow-up session s within three weeks of enrolment and up to four secondary follow-up sessions within one to 12 months of enrolment.
	• Pharmacies in Ontario may apply for the Ontario Naloxone Program for Pharmacies under which participating pharmacies can distribute publicly funded injectable naloxone kits or intranasal naloxone spray kits.
	• Pharmacists are responsible for assessing whether the prescribed opioid therapy is appropriate given the clinical status of the patient as well as enabling the narcotic monitoring system notifications prior to dispensing.
	  ○ Pharmacists are also responsible for providing opioid-related education to individuals including information on potential adverse events, monitoring parameters to ensure continuous appropriateness of opioid therapy and safe storage.
	• Community pharmacies must inform the College within seven days of starting to dispense methadone maintenance therapy and of any changes in this information.
	  ○ The designated manager must be trained in methadone via the CAMH Opioid Use Disorder Treatment Course or comparable course within six months of beginning a methadone practice.
	  ○ One additional staff pharmacist must also complete these training requirements within one year as well as a number of Ontario Pharmacist Association addictions education courses.
	  ○ The pharmacist is responsible for dispensing directly to the patient, dispensing directly to the physician/delegate or transporting to the physician/delegate using a method that is secure, auditable and traceable.

Quebec	• In Quebec, pharmacists are able to prescribe smoking-cessation treatment and are reimbursed for prescribing under minor ailments rather than for counselling services. • Pharmacists are encouraged to provide some education and resources related to alcohol including on appropriate levels of consumption and should advise patients when contraindications are present with medications they are taking.
New Brunswick	• Pharmacists can deliver smoking cessation services including counselling patients on nicotine replacement therapies. • Pharmacists can dispense and transfer opioid agonist treatment and they are encouraged to undertake a course to ensure they are competent in dealing with opioid overdose and the use of naloxone.

Jurisdiction	Description of pharmacist interventions
Nova Scotia	• In Nova Scotia, smoking cessation services may be provided but coverage for nicotine replacement therapies are available through Stop Smoking Services. • Pharmacists in Nova Scotia may choose to participate in a free take-home naloxone program in which naloxone and education are provided to Nova Scotians at risk of an opioid overdose and those who are most likely to witness and respond to an opioid overdose. • Pharmacists in Nova Scotia are responsible for distributing and witnessing buprenorphine and methadone following a patient assessment o Pharmacists in Nova Scotia are not able to suggest take-home doses unless in exceptional cases. o Pharmacists are responsible for working with the prescriber if the patient has not picked up their daily dose or misses a dose, reuses all or a portion of their daily dose or exhibits evidence of diverting methadone or buprenorphine. • Pharmacists in Nova Scotia are directed to use screening and brief intervention to identify current or potential issues that may impact their safety or treatment success.
Prince Edward Island	• In PEI, pharmacists work collaboratively with primary-care providers for tobacco cessation where by pharmacists are responsible for filling nicotine replacement products or smoking cessation medication that are recommended by a primary-care provider. • In PEI, pharmacists must apply for an extended practice certificate to dispense methadone and suboxone which includes completing an education program on opioid-use disorders and opioid-use disorder treatment. o These certificates must be renewed annually. o Further pharmacy technicians working in pharmacies that dispense buprenorphine or methadone must complete training and submit proof of successful completion of the continuing education course. o Pharmacists are also expected to be competence in opioid withdrawal and its management, dosing issues, expected activities of pharmacist providing opioid agonist treatment and community support and referral resources. • Pharmacists may dispense and witness buprenorphine, methadone and suboxone but must provide injectable or implantable buprenorphine back to primary-care providers to undertake the administration process.
Newfoundland and Labrador	• In Newfoundland and Labrador, individuals may go to a doctor, nurse or pharmacist to discuss nicotine replace therapy or prescription medication. o To access the service, individuals must present a drug card to indicate eligibility for coverage under the program. o Medication is not free but is available at a reduced price. • Naloxone is distributed in community clinics rather than in pharmacies. • Pharmacists are required to receive authorization from the board to participate in medication-assisted treatment including providing proof of successful completion of an education program on the use of medication in the treatment of opioid dependence. o The pharmacy must also register with the pharmacy board as a site for opioid dependence treatment and will consider pharmacy layout and design, hours of operation, pharmacy network and connection to the provincial electronic health record, staff education, security, the availability of policy and procedure manual, and required references available to pharmacy staff. o To distribute opioid dependence treatment a written agreement must be established with both the prescriber and patient. o Patients are generally eligible for their first take-home dose if they meet specific criteria for clinical stability and have had at least three months in the methadone program; strict eligibility requirements are in place for exceptional circumstances and bottle return and take-home dose audits may be undertaken by the pharmacist.
Northwest Territories	• In the Northwest Territories some pharmacists dispense take-home naloxone, but due to geography they are quite spread apart and local health centres also carry it. • Opioid maintenance therapy is not provided in pharmacies and is delivered out of primary-care centres or out-of-territory treatment facilities.
Yukon	• Free take-home naloxone kits are available at all pharmacies across the Yukon. • Opioid agonist treatments are provided in primary-care offices, though prescriptions are filled by pharmacists.
Nunavut	• No information identified.

Appendix 5: Detailed data extractions from evidence syntheses about pharmacist interventions for supporting individuals with substance use

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
  ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies
  ○ Screening, brief intervention (or de-escalation) and referral to treatment (SBIRT)
  ○ Opioid stewardship
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
  ▪ Mortality
  ▪ Substance use
	12 tools were identified that can be used in community pharmacy settings to identify problematic opioid use (31)
	
	• Employment of the identified screening tools could lead to increased identification of patients with problematic opioid use, outpatient intervention referrals and naloxone kit dispersion.
	• Of the 12 tools for problematic opioid use assessment, seven were self-administered, two were clinician/provider-administered and two could be administered by both/either.
	• Barriers include the growing utilization of mail order and central fill pharmacies, which prevents in-person screening or assessment. Another barrier pertains to limited pharmacist time.
		High	Not living	2/9	2019	Not available	None identified

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
	Pharmacists had positive attitudes toward increased practice responsibilities for patients at risk of an opioid overdose or with an opioid-use disorder (11)
	
	• Across studies, pharmacist respondents expressed that a standing order would help increase stocking and dispensing of naloxone and believed that naloxone should be prescribed to patients at risk of an opioid overdose.
		High	Not living	4/9	2018	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Other (dispensing naloxone and medications for opioid-use disorder) • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Mortality ▪ Substance use ▪ Hospitalization ○ Provider experience	• Pharmacists reported feelings of discomfort around supplying naloxone without a prescription or not as part of a protocol. • Pharmacists reported a need for additional education and training, increased time with patients, support from management, and integration of naloxone and buprenorphine dispersion and patient counselling into existing workflow.						
• For what types of substances ○ Tobacco • In what settings ○ Community pharmacies ○ Other community-based settings (e.g., primary-care offices) ○ Acute care settings • Using what interventions/approaches ○ Patient education and supporting self-management ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies ○ Screening, brief intervention (or de-escalation) and referral to treatment (SBIRT) ○ Witnessing or supervising dose ingestion or administration including supervised injection/consumption sites • Using what mode of delivery ○ In-person ○ Virtual • Using what type of remuneration ○ Fee for service	Pharmacists employ a variety of methods to manage tobacco cessation services and can assist patients in achieving abstinence (28) • The settings for tobacco cessation services varied, including ambulatory care (68.8%), community (25.0%) and managed care (6.3%). Delivery of care included face-to-face (68.8%), telephone (18.8%) and both methods (12.5%). • Most studies (56.3%) allowed for any U.S. Food and Drug Administration–approved medication for tobacco cessation, including nicotine replacement therapies as well as varenicline and sustained-release bupropion. • Tobacco cessation was measured via self-report (62.5%), carbon monoxide (6.3%) and cotinine in the saliva (6.3%) and in the urine (6.3%). In 31.3% of studies, the measurement methods were not specified. The rate of tobacco cessation among articles ranged from 3.98% to 77.14%.	High	Not living	4/9	2019	Not available	None identified
• For what types of substances ○ Opiates • In what settings	All 50 states have implemented an enhanced community pharmacy naloxone access policy, but only 19 states require pharmacists to complete	High	Not living	1/9	2017	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Community pharmacies • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Mortality ▪ Substance use ▪ Hospitalization ○ Care experiences ○ Access to care	training before engaging in naloxone dispensing activities (12) • The literature found that pharmacists with naloxone training were better equipped to deliver patient counselling than pharmacists without training. • Required naloxone training seems to increase pharmacists' willingness and confidence to engage in enhanced naloxone dispensing activities. • There is a lack of standardization from state-to-state in how pharmacists are trained to engage in enhanced naloxone dispensing activities.						
• For what types of substances ○ Opiates • In what settings ○ Community pharmacies ○ Other community-based settings • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Mortality ▪ Substance use ▪ Hospitalization	Pharmacists are well positioned to dispense naloxone and can play a vital role in opioid provision, patients and caregiver education, dissemination of information, and overdose-related death prevention (13) • Many states have employed initiatives to educate pharmacists about opioid overdose and misuse, but empirical evidence suggests a gap between pharmacists' potential roles and their current roles. • Findings from a study that employed a developed systematic co-prescribing program found that in the first six months 49 patients were identified as at risk for opioid overdose. 84% were educated by pharmacists and 69% were dispensed naloxone after a pharmacist-led program was established. • Many reported barriers were related to systems, tools and policies, including time constraints, inadequate reimbursement and lack of institutional support. Others related to pharmacist willingness and confidence to dispense naloxone.	High	Not living	2/9	2020	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• For what types of substances
  ○ Alcohol
  ○ Tobacco
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Prescribing, deprescribing, tapering or adapting medication-assisted therapies
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
  ▪ Substance use
	Nicotine replacement therapy delivered by community pharmacists had mixed effectiveness on reducing smoking, but no effects were identified from brief alcohol advice (29)
	
	• Services provided by pharmacists, pharmacy technicians and/or medicine counter assistants tended to focus on either pharmaceutical related (e.g., supplying nicotine replacement therapy) or non-pharmaceutical-related behaviour-change strategies.
	• Funding arrangements for these services were found to vary by country, in the U.K. they are commissioned by local authorities according to need.
	• With respect to alcohol reduction interventions, two randomized controlled trials on brief alcohol advice, neither of which were found to significantly reduce alcohol scores compared with control at 12 weeks.
	• Smoking cessation interventions focused predominantly on nicotine replacement therapy, with one comparing behavioural support with nicotine replacement.
	• Five of 12 studies demonstrated effectiveness of nicotine replacement therapy delivered by pharmacists, with a higher effectiveness rating when compared to non-active/usual care than with an active comparator.
		High	Not living	7/10	2016	Not available	• Gender

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
	Community pharmacy–based take-home naloxone programs are effective at reducing overdose in community members and may be facilitated by government supports, funding and public education (3)
	
	• The purpose of this scoping review was to explore the scope of community pharmacy-based take-home naloxone programs.
		High	Not living	6/9	2020	Not available	• Place of residence

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations

• Using what type of remuneration
  ○ Fee for service
  ○ Global/block funding
• Outcomes
  ○ Health outcomes
  ▪ Hospitalization
  ○ Care experiences
  ▪ Access to care
  ○ Cost
	• This review found that community pharmacy–based take-home naloxone programs were effective at reducing overdose.
	• Facilitators of community pharmacy–based take-home naloxone programs are laws permitting its use, public funding, proactive delivery of programs, privacy in delivery, standardized training and protocols for pharmacists, and public education on the utility of naloxone.
	• Barriers of community pharmacy–based take-home naloxone programs are limited access in rural areas and independent pharmacies, lack of time in pharmacy settings, misinformation about naloxone and general stigma of opioid usage.
	• Supports post community pharmacy–based take-home naloxone use might be helpful in supporting community members. Supports might include education, counselling and offering recovery programs.						

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ Virtual
• Outcomes
  ○ Provider experience
	Virtual educational programs for buprenorphine dispensing involving information on opioid-use disorder, prescribing procedures and patient communication can improve pharmacist confidence in supporting people with a substance-use disorder (25)
	• The purpose of this content review was to describe continuing education programs to support pharmacists in buprenorphine dispensing.
		High	Not living	2/9	2022	Not available	None identified

• For what types of substances ○ Opiates • In what settings	The review found that pharmacists had a significant role in opioid stewardship, particularly in professional education, medication therapy adjustments, community stakeholder education,	High	Not living	6/9	2020	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
○ Community pharmacies ○ Acute care settings • Using what interventions/approaches ○ Opioid stewardship • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ○ Substance use	policy and guideline setting and risk assessment (32) • Opioid stewardship is defined as coordinated interventions designed to improve, monitor and evaluate the use of opioids in order to support and protect human health. • The review included 77 articles, most of which (74%) were conducted in hospital while the remaining were conducted in a community pharmacy setting, except three, which were provided in an academic setting. • Benefits were noted in interventions where pharmacists took an active role in preventative measures and worked alongside other health professionals to manage pain. • An increase in the provision of naloxone was reported in four studies, while a reduction in morphine equivalents was reported in seven. • Involving an education component either led by a pharmacist independently or as part of an interdisciplinary team was generally associated with reduction in opioid use and enhanced knowledge and understanding. • Tools to screen for opioid risk were identified in three studies, one of which (ONE Rx) was found to help individualize patient education and interventions.						
• For what types of substances ○ Opiates • In what settings ○ Other community-based settings (e.g., primary-care offices) ○ Acute care settings • Using what interventions/approaches ○ Patient education and supporting self-management ○ Supporting harm-reduction approaches including naloxone	Pharmacists' naloxone services in various healthcare settings positively impact the identification of at-risk patients, education efforts and recipients' attitudes and knowledge (4) • Pharmacists' interventions included the use of screening tools to identify at-risk patients, naloxone prescribing or co-prescribing, education of pharmacy and clinical staff, and provision of Overdose Education and Naloxone Distribution (OEND) services, with	High	Not living	7/11	2022	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
education, drug checking and clean needle distribution ○ Drug safety monitoring including point-of-care testing/ laboratory testing ○ Screening, brief intervention (or de-escalation) and referral to treatment (SBIRT) ○ Opioid stewardship • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Substance use ○ Care experiences ▪ Access to care	a positive impact on patient outcomes in non-community pharmacy settings. • Barriers to naloxone service implementation were identified at the patient (e.g., lack of interest, resistance, stigma), pharmacist (e.g., inadequate training, time constraints, concerns about patient offense) and system levels (e.g., protocol and policy issues, inadequate institutional support, workflow/logistic concerns).						
• For what types of substances ○ Tobacco ○ Nicotine (e.g., vaping or 'tobacco-free' products) • In what settings ○ Community pharmacies • Using what interventions/approaches ○ Patient education and supporting self-management ○ Screening, brief intervention (or de-escalation) and referral to treatment (SBIRT) • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Substance use	Pharmacist-led smoking cessation interventions show mixed evidence on effectiveness, with varying quit rates reported, and a notable degree of uncertainty with regards to the cost-effectiveness of pharmacist-led interventions for smoking cessation (30) • The included studies focused on adult participants who were smokers or engaged in smoking cessation interventions, with diverse populations from the United States, the United Kingdom, Switzerland and Australia. • Pharmacist-led smoking cessation interventions varied widely, encompassing one-on-one counselling, group sessions, tailored approaches, behavioural support and financial incentives, sometimes incorporating nicotine replacement therapy and exhibiting differences in duration and frequency. • Policymakers and decision-makers should consider the mixed evidence on clinical effectiveness and cost-effectiveness when contemplating the integration of pharmacist-	High	Not living	8/11	2019	Not available	None identified

Dimension of organizing framework	Declarative title and key findings	Relevance rating	Living status	Quality (AMSTAR)	Last year literature searched	Availability of GRADE profile	Equity considerations
	led smoking cessation interventions into healthcare strategies.						

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
	Opioid counselling, naloxone dispensing and client education are commonly used community pharmacist–led interventions that can be supported by standardized recommendations, training, and increased resources for pharmacists (33)
	
	• The purpose of this scoping review was to explore the scope of community pharmacist–delivered opioid counselling and naloxone services models in the United States.
	• Motivational interviewing was also used by community pharmacists, but was less common (n=2 studies).
	• Barriers to interventions include limited resources, time and knowledge about naloxone and opioids.
		Medium	Not living	4/9	2022	Not available	None identified

Appendix 6: Detailed data extractions from single studies about pharmacist interventions for supporting individuals with substance use

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• For what substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
	High	*Focus of study:* Expanding the implementation of opioid overdose prevention and naloxone dispensation
		
		Publication date: 2022
		
		Jurisdiction studied: New York
		
		Methods used: Qualitative
			State-wide expansion of opioid overdose prevention and naloxone dispensation among rural and small metro areas, including expanding fee-for-service coverage and co-payment assistance.	The study identified a range of barriers to the limited expansion of opioid overdose prevention and naloxone dispensation among rural and small metro areas (5)
				• The study found limited state supervision of clinician opioid and naloxone prescribing, with few audits of prescription drug monitoring databases prior to prescribing opioids.
				• The study identified that high out-of-pocket costs for naloxone were frequently prohibitive of broader adoption; the suggestion for improving this was to provide free coupons to be distributed by pharmacists or to host free naloxone days.
				• Limited patient education on opioid overdose prevention and naloxone by prescribers was a reoccurring obstacle.

• For what substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Opioid tapering
• Using what mode of delivery
  ○ Virtual (telephone)
• Outcomes
  ○ Health outcomes
  ○ Care experiences
	High	*Focus of study:* Pharmacist-provided opioid tapering support
		
		Publication date: 2023
		
		Jurisdiction studied: Oregon and Washington
		
		Methods used: Qualitative
			50 patients using high-dose opioid therapies that received a personalized tapering plan and ongoing tapering support to patients via telephone outreach that provides non-opioid recommendations for pain management, including referrals to other services.	Mixed effects were reported for the pharmacist-provided opioid tapering support program including some patients reporting lower quality of life and increased pain (19)
				• Most participants (60%) reported still using some form of opioid medication, though most reported using a lower dose than before.
				• Following the intervention, two distinct groups of patient experience were reported, including 60% of patients expressing a generally positive and satisfied experience while 40% described a mixed or negative experience.
				• All patients expressed positive experiences with their pharmacists, noting in particular being appreciative of someone available to address their questions.
				• Most patients described trusting the expertise and support of the pharmacists and welcomed their advocacy in communicating needs or changes in taper goals to their primary-care provider.
				• Approximately half of the patients expressed frustration with the non-medication pain management options offered, reporting that recommendations were unhelpful, redundant or too costly to pursue.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
				• A quarter of the patients reported that their quality of life was adversely affected during the taper process and the intensity of the withdrawal symptoms. • Recommendations for changes to the program include greater personalization, more outreach and increased inclusion of other healthcare providers such as behavioural health and addictions medicine specialists, and improving rapport by offering an in-person option rather than only phone-based.

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
  ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
▪ Substance use
  ○ Care experiences
▪ Access to care
  ○ Provider experiences
	High	*Focus of study:* To explore the role of pharmacists in providing care for people with opioid-use disorder
		
		Publication date: 10 January 2022
		
		Jurisdiction studied: Canada
		
		Methods used: Qualitative
			A total of 19 pharmacists participated in this study.	Pharmacist-led interventions including prescribing methadone and naloxone counselling provide safe and accessible treatment to people with an opioid-use disorder (26)
				• Pharmacists described feeling confident with their provided care as they can appropriately support their clients in safely and accessibly managing their condition.

• For what types of substances
  ○ Tobacco
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Patient education and supporting self-management
• Using what mode of delivery
  ○ In-person
	High	*Focus of study:* To compare abstinence rates and cost-effectiveness between two pharmacists led smoking cessation programs
		
		Publication date: December 2022
		
		Jurisdiction studied: Newfoundland and Labrador
			A total of 65 participants were included in this study. The first intervention (n=33) was an intensive smoking cessation program that involved two weekly sessions and individualized support. The comparator intervention (n=32) was an abbreviated smoking cessation program that was conducted in a	Community pharmacist–led smoking cessation programs involving patient education can reduce smoking behaviour and are cost-effective (1)
				• There was no statistically significant difference in abstinence rates between both groups. However, the rates of each group (36% intensive; 22% abbreviated) were higher than other studies in the literature and community.
				• The cost-effectiveness of both programs was comparable to other programs in the literature. The intensive group costs about $1,420 per quit and the abbreviated group was $1,217 per quit.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
○ Virtual • Outcomes ○ Health outcomes ▪ Substance use ○ Cost-related outcomes		*Methods used:* Pragmatic mixed methods	pharmacy setting and involved fewer follow-ups. In-person and virtual communication was available for both interventions.	
• For what types of substances ○ Opiates • In what settings ○ Community pharmacists • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person ○ Virtual • Outcomes ○ Care experiences ▪ Access to care	High	*Focus of study:* To compare the effectiveness of two educational campaigns in increasing the acceptance rate of naloxone rescue kits *Publication date:* 2021 *Jurisdiction studied:* St. Louis *Methods used:* Retrospective study	A total of 335 pharmacists participated in this study. The primary intervention was an educational mail campaign along with a phone call from a clinical pharmacy specialist. The comparator intervention was an educational mail campaign.	Educational mail campaign and phone call was more affective at increasing acceptance rates and accessibility of naloxone kits than mail campaigns alone (7)
• For what types of substances ○ Opiates • In what settings ○ Community pharmacists • Using what interventions/approaches ○ Patient education and supporting self-management ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person • Outcomes ○ Health outcomes ▪ Substance use ○ Care experiences • Access to care	High	*Focus of study:* To determine the effect of pharmacy-based naloxone co-dispensing on opioid risk behaviour *Publication date:* 7 February 2022 *Jurisdiction studied:* Denver, Colorado *Methods used:* Cluster randomized pragmatic trial	A total of 358 participants from seven different pharmacies participated in this study. This study compared pharmacies co-dispensing naloxone to usual pharmacy services.	In-person community pharmacists co-dispensing of naloxone and educational materials can improve patient access to naloxone and knowledge on overdose (8) • Opioid overdoses were not significantly different between either group.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
  ○ Other-community based settings
  ○ Acute care settings
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
  ▪ Substance use
  ○ Care experiences
  ▪ Access to care
  ○ Provider experience
  ○ Cost-related outcomes
	High	*Focus of study:* To explore the perspectives of community pharmacy staff in administering and dispensing methadone for opioid-use disorder
		
		Publication date: 2023
		
		Jurisdiction studied: North Carolina
		
		Methods used: Qualitative
			A total of 14 pharmacists and workers from opioid treatment programs participated in this study. The intervention consisted of in-person dispensing of methadone.	In-person community pharmacists administering and dispensing of methadone for opioid-use disorder can improve health outcomes, care experiences and provider satisfaction, given that it is supported with sufficient resources and pharmacist training (20)
				• Community pharmacists administering and dispensing methadone for persons with an opioid-use disorder as it increases their access to services can result in less substance use, and is more costeffective than opioid treatment programs.
				• This service has benefits to healthcare professionals. Pharmacists can increase their roles and collaborate with primary physicians. Additionally, opioid treatment programs may increase their capacity to help more patients.
				• Barriers to the implementation of this service include difficulty in monitoring patients receiving care from multiple pharmacies, challenges with record keeping and insufficient resources. Opioid treatment programs may also hesitate about this program as it may reduce their revenue.
				• Strategies to reduce the barriers of this program involve education for pharmacists, standardized protocols, trust and privacy between pharmacists and patients, increase staff to account for additional responsibilities, and resources for record keeping and inventory management.

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
• Using what type of remuneration
  ○ Fee for service
	High	*Focus of study:* To describe the experiences of persons using an opioid replacement therapy
		
		Publication date: September 2019
		
		Jurisdiction studied: Australia
		
		Methods used: Interpretative phenomenology
			Persons receiving opioid replacement therapy in Australia participated in this study. The intervention was an in-person opioid replacement therapy administered by a community pharmacist.	Opioid replacement therapy administered in-person by community pharmacists can increase patient satisfaction and access to care, but societal stigma and the financial burden of this treatment can hinder participation (22)
				• Participants described that the opioid replacement therapy provided by community pharmacists increased their access to services and made them feel understood and comfortable with receiving treatment.
				• Participants described challenges with the program including the stigmatizing setting of a pharmacy, cost of dispensing fees and difficulties with commuting to pharmacies.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• Outcomes
  ○ Health outcomes
  ▪ Substance use
  ○ Care experiences
  ▪ Access to care
  ▪ Patient satisfaction
  ○ Cost				

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
  ○ Other-community based settings
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
  ▪ Substance use
  ○ Provider experience
	High	*Focus of study:* To explore the perceptions of community pharmacists in providing opioid substitution treatment
		
		Publication date: 22 December 2020
		
		Jurisdiction studied: New Zealand
		
		Methods used: Qualitative
			A total of 13 pharmacists participated in this study.	Pharmacist-led opioid substitution treatment can increase access to care and limit substance use by monitoring, educating and providing methadone treatments; this treatment can be facilitated with clear communication amongst patients and all healthcare (23)
				• Participants described feeling confident in their roles and ability to support persons with substance-use disorders by monitoring, providing educational strategies and offering methadone treatment.
				• Barriers to providing effective care include pharmacists' limited access to patient files and difficulties with connecting to general practitioners.
				• Frequent and clear communication with patients, general practitioners and pharmacists can improve the efficacy of community pharmacists' opioid substitution treatment.

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
• Using what type of remuneration
  ○ Fee for service
	High	*Focus of study:* To explore pharmacists' perceptions on harm reduction services
		
		Publication date: 2021
		
		Jurisdiction studied: North Carolina
		
		Methods used: Cross-sectional
			A total of 300 pharmacists participated in this study. The harm reduction services discussed in this study were non-prescription syringes and naloxone kits.	Hesitancy in providing access to non-prescription syringes and naloxone from rural and urban North Caroline pharmacists may be due to a lack of education on overdose and substance use stigma (15)
				• Most participants reported company policies restricting non-prescription syringe sales. Pharmacists from rural communities were less likely to sell non-prescription syringes than pharmacists from urban communities.
				• Most participants were willing to dispense naloxone, given a prescription was provided. Most participants (83%) did not feel comfortable dispensing naloxone to persons suspected of having a substance-use disorder.
				• Approximately 53% of pharmacists were not interested in learning about naloxone and anti-addiction stigma.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• For what types of substances
  ○ Alcohol
• In what settings
  ○ Community pharmacies
  ○ Other community-based settings (e.g., primary-care offices)
  ○ Acute care settings
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Outcomes
  ○ Health outcomes
  ▪ Substance use
  ○ Care experiences
  ▪ Patient experience
	High	*Focus of study:* To explore service users experiences with a relapse prevention medication
		
		Publication date: 15 March 2022
		
		Jurisdiction studied: England
		
		Methods used: Qualitative
			A total of 26 participants were included in this study. The intervention of interest was a pharmacist telephone service to support relapse prevention medication.	Pharmacist telephone services can support relapse prevention medication and improve health outcomes in persons with an alcohol-use disorder, if pharmacists are communicative, empathetic and trained on the impacts of alcoholism (18)
				• Barriers to taking a relapse prevention medication include difficulty in receiving a prescription from their general practitioner, internalized stigma, missing doses and negative side effects.
				• Participants believed that pharmacist telephone service could facilitate their use of the medication by providing emotional support and education about the interactions of the medication.
				• However, participants believed that pharmacists needed training on the impacts of alcoholism as well as how to build rapport with patients to ensure that the service was effective.

• For what types of substances
  ○ Injected substances
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
• Using what type of remuneration
  ○ Fee for service
• Outcomes
  ○ Care experiences
  ▪ Access to care
	High	*Focus of study:* To explore pharmacists' attitudes towards over-the-counter syringe sale policies
		
		Publication date: 2022
		
		Jurisdiction studied: Eastern Kentucky
		
		Methods used: Qualitative
			A total of 14 pharmacists participated in this study. The intervention of interest was over-the-counter syringe sales.	Community pharmacist sales of the over-the-counter syringes may be hindered by negative attitudes towards substance use and strict procedures and laws (16)
				• Most pharmacies kept a record of all sales and required proof of medical need for a sale. Proof consisted of medical history, contacting other health professionals or in-depth discussions with patients.
				• Pharmacists' attitudes towards the sale of over-the-counter syringes were based on their personal experiences. Persons who had strong ties to the communities had established trust with their patients and were willing to sell to people who they felt needed syringes for medical reasons. Other individuals were hesitant if they had exposure to overdose.
				• Participants believed that clean syringes are important to reduce blood-borne infections, however, could enable drug use and syringe littering.

• For what types of substances ○ Opiates • In what settings	High	*Focus of study:* To explore rural pharmacists' experiences with dispensing	A total of 16 participants participated in this study. Participants were	Stigma, high costs and lack of stock in pharmacies are barriers for dispensing opioid-use medication in rural pharmacies; communication between prescribers and pharmacists and

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
○ Community pharmacists • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies • Using what mode of delivery ○ In-person • Using what type of remuneration ○ Fee for service • Outcomes ○ Care experiences ▪ Access to care ○ Cost		medications to manage opioid-use disorder *Publication date:* 8 October 2021 *Jurisdiction studied:* North Carolina *Methods used:* Qualitative	pharmacists, harm reduction staff and persons who were prescribed medication for their opioid-use disorder. The intervention of interest was the medication buprenorphine, used to manage opioid-use disorder.	support from organization leads are needed to reduce barriers and improve access to treatment (27)
• For what types of substances ○ Opiates ○ Stimulants • In what settings ○ Community pharmacies • Using what interventions/approaches ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies • Using what mode of delivery ○ In-person • Outcomes ○ Care experiences ▪ Retention in treatment	High	*Focus of study:* To explore the impact of methadone dispensing locations (clinic vs. community pharmacies) on treatment retention for patients initiating methadone maintenance therapy *Publication date:* 2018 *Jurisdiction studied:* Ontario *Methods used:* Cohort design	The study included a cohort of 3743 patients who initiated methadone maintenance treatment in Ontario, Canada, between 1 January 2011 and 17 June 2012. Patients were drawn from a network of 43 addiction clinics, with approximately 70% (n=2,605) filling their methadone prescriptions at clinic (on-site) pharmacies and 30% (n=1,138) at community (off-site) pharmacies. The primary intervention of interest was the location of methadone dosing, categorized as clinic (on-site) pharmacy or community (off-site) pharmacy.	Patients receiving methadone dosing within the clinic have a significantly higher chance of staying in treatment (i.e., substantially higher one-year retention rates) compared to those getting dosing from community pharmacies, highlighting the positive impact of in-clinic collaboration on methadone maintenance therapy retention (21)

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
			The study aimed to assess the impact of this intervention on the retention of patients in maintenance treatment over a one-year period, comparing treatment outcomes between those using clinic (on-site) and community (off-site) pharmacies.	

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
  ○ Opioid stewardship
• Using what mode of delivery
  ○ In-person
• Outcomes
  ○ Health outcomes
  ▪ Substance use
  ▪ Hospitalization
  ○ Care experiences
  ▪ Access to care
  ○ Patient experience
	High	*Focus of study:* To explore the impact of introducing intranasal naloxone and removing health card requirements on pharmacy-based naloxone dispensing in Ontario
		
		Publication date: 2021
		
		Jurisdiction studied: Ontario
		
		Methods used: Population-based time series analysis, utilizing interventional autoregressive integrated moving average (ARIMA) models to assess the changes in naloxone dispensing rates
			The study included all residents in Ontario between 1 July 2016 and 31 March 2020, comprising a population-based time series analysis. A total of 199,484 individuals were dispensed naloxone kits through the Ontario Naloxone Program for Pharmacies during the study period. The intervention involved changes to the Ontario Naloxone Program for Pharmacies in March 2018, introducing intranasal naloxone and removing the requirement for residents to present a government health card.
			The program aimed to increase pharmacy-based naloxone dispensing and targeted specific barriers, especially among high-risk groups such as opioid agonist therapy recipients and individuals with a history of opioid exposure.
				The introduction of intranasal naloxone and the removal of health card requirements in the Ontario Naloxone Program for Pharmacies substantially increased pharmacy-based naloxone dispensing, particularly among high-risk individuals, demonstrating the effectiveness of addressing specific access barriers (9)
				• Implementation of intranasal naloxone and removal of health card requirement in the Ontario Naloxone Program for Pharmacies led to a 65.1% increase in pharmacy-based naloxone dispensing.

• For what types of substances ○ Opiates	High	*Focus of study:* To explore the experiences of individuals accessing pharmacy-	The study included participants from varied backgrounds, specifically	While pharmacy-based naloxone distribution was generally supported, addressing stigma, enhancing privacy, normalizing naloxone and incorporating opt-out programs could optimize

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
• Using what mode of delivery
  ○ In-person
		dispensed naloxone, emphasizing social and environmental factors influencing accessibility
		
		Publication date: 2021
		
		Jurisdiction studied: Ontario
		
		Methods used: Qualitative research methods, involving interviews with individuals accessing pharmacy-dispensed naloxone
			targeting individuals accessing pharmacy-dispensed naloxone, with a focus on rural settings and diverse experiences related to naloxone use. The intervention involved pharmacy-dispensed naloxone programs, with a particular emphasis on exploring the social, structural and environmental factors influencing the accessibility of naloxone in pharmacies.	accessibility, particularly for individuals taking opioids for reasons other than chronic pain (10)
				• Judgement and stereotyping in the pharmacy setting may amplify social risks, limiting accessibility of pharmacy-dispensed naloxone.
				• Despite increased naloxone availability, addressing social and environmental factors is crucial for creating enabling environments in pharmacies and optimizing impact.

• For what types of substances
  ○ Tobacco
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies
	High	*Focus of study:* To explore perspectives and perceived barriers to pharmacist-prescribed tobacco cessation services in the community pharmacy setting
		
		Publication date: January 2021
		
		Jurisdiction studied: United States
		
		Methods used: Cross-sectional survey
			Pharmacy personnel of a large grocery pharmacy chain were asked to complete an electronic survey about pharmacist-prescribed tobacco cessation services and current practices of the 5As (Ask, Advise, Assess, Assist and Arrange) model when providing counselling.	Most community pharmacists that practiced in U.S. states with prescriptive authority for tobacco cessation believed that pharmacists should provide tobacco cessation services but said that the biggest barrier to these services being provided was a lack of time followed by a lack of reimbursement from third-party payers (2)
				• Additional barriers identified included limited staffing, the small proportion of patient smokers, high costs of tobacco cessation medications and the lack of company protocols for services.
				• Most pharmacists surveyed did not practice the 5As model regularly, and the top three areas of training identified were 1) strategies to develop a follow-up plan for patients, 2) incorporating tobacco cessation services into pharmacists' workflow and 3) strategies for providing tobacco cessation counselling.

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
  ○ Other community-based settings (e.g., primary-care offices)
  ○ Acute care settings
• Using what interventions/approaches
	High	*Focus of study:* To explore pharmacy naloxone co-dispensing; a mixed methods study of practices and perspectives under a state-wide standing order program
		
		Publication date: March 2022
			Information from three focus groups (n=27) and a survey (n=339) of licensed Massachusetts pharmacists working in independent research retail pharmacies was collected between September 2018 and November 2019. Pharmacists were asked	Pharmacists in Massachusetts supported the promotion of naloxone co-dispensing alongside opioid prescriptions and suggested that facilitators to co-dispensing were pre-existing relationships between pharmacists and prescribers, workflow reorganization, mandatory pharmacist consultation for opioid-prescribed patients, and universal naloxone promotion to patients who meet certain criteria (14)
				• Almost all pharmacists reported using an 'opt-in' approach whereby patients can ask whether they want naloxone with their prescriptions.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person		*Jurisdiction studied:* Massachusetts *Methods used:* Mixed methods	about the facilitators and barriers to co-dispensing naloxone.	• Some barriers to co-dispensing that pharmacists highlighted were insufficient technician training, workflow and resource constraints, and misconceptions surrounding naloxone.
• For what types of substances ○ Opiates • In what settings ○ Community pharmacies • Using what interventions/approaches ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies ○ Drug delivery, outreach or mobile pharmacy services • Using what mode of delivery ○ In-person • Outcomes ○ Care experiences ▪ Access to care ▪ Retention in treatment ○ Patient satisfaction	High	*Focus of study:* To explore patient perspectives on community pharmacy administration and dispensing of methadone treatment for opioid-use disorder *Publication date:* August 2023 *Jurisdiction studied:* United States *Methods used:* Survey	17 patients who participated in the first U.S. trial on pharmacy administration and dispensing of methadone treatment for opioid-use disorder (PADMOUD) using electronic prescribing were interviewed about their perspectives on PADMOUD.	Patients who participated in an electronic prescribing program of pharmacy administration and dispensing of methadone treatment for opioid-use disorder (PADMOUD) found that local pharmacies were more accessible and convenient than opioid treatment programs when accessing methadone and that PADMOUD was a good option for patients with take-home doses and transportation challenges (24)
• For what types of substances ○ Opiates • In what settings ○ Community pharmacies • Using what interventions/approaches ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies ○ Drug safety monitoring including point-of-care testing/ laboratory testing ○ Withdrawal management • Using what mode of delivery ○ In-person • Outcomes	High	*Focus of study:* To better understand enablers and barriers to a collaborative model for medication assisted treatment for opioid dependence (MATOD) *Publication date:* 2023 *Jurisdiction studied:* Australia *Methods used:* Qualitative semi-structured telephone-interviews	Pharmacists (11), prescribers (six) and patients (eight) from Frankston-Mornington Peninsula in Victoria, Australia. Medication-assisted treatment for opioid dependence	Medication-assisted treatment of opioid dependence (MATOD) is best undertaken through a collaborative model along with tailored training, individualized agreements, protocol-driven care and ongoing assessment and adaptation • Reported benefits of a collaborative care model in MATOD include ease of access, convenience and improved continuity of care. • There is a need for additional pharmacist training and credentialing through an accredited program. • While patients support the inclusion of prescribers in the model, they still have confidence in extending pharmacists' roles.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings
○ Care experiences ▪ Access to care ▪ Patient satisfaction ○ Provider experience				
• For what types of substances ○ Opiates • In what settings ○ Community pharmacies ○ Other community-based settings (e.g., primary-care offices) • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person • Outcomes ○ Care experiences ▪ Access to care ○ Provider experience	High	*Focus of study:* To characterize naloxone dispensing barriers, overall and by pharmacy type, make recommendations that can inform future policies to improve naloxone access, and evaluate outreach initiative effectiveness from academic detailers' perspective *Publication date:* 2022 *Jurisdiction studied:* Illinois *Methods used:* Retrospective analysis of semi-structured data collected from an educational outreach program	Academic detailers supporting community pharmacists' education about dispensing naloxone. Dispensing naloxone by community pharmacists in both settings operating under the Naloxone Standing Order and independent settings.	Challenges to dispensing naloxone include cost/insurance issues and patient stigma-related factors (especially in primary or grocery pharmacy settings), highlighting the need for academic detailing as a tool to overcome these barriers among community pharmacists (6) • More than 80% of pharmacists faced more than one barrier to dispensing naloxone, with pharmacists at independent pharmacies feeling less comfortable dispensing compared to pharmacists operating the Naloxone Standing Order.
• For what types of substances ○ Opiates • In what settings ○ Community pharmacies • Using what interventions/approaches ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution • Using what mode of delivery ○ In-person	High	*Focus of study:* To examine pharmacists' perspectives or experiences of Australia's change to over-the-counter pharmacist supply of naloxone *Publication date:* 2019 *Jurisdiction studied:* Australia *Methods used:* Semi-structured interviews	Naloxone provision at community pharmacies.	Limited pharmacist awareness and provision of over-the-counter naloxone appeared to be due to constraints such as discomfort discussing overdose risk and stigma, suggesting the need for education training, and systemic strategies to enhance pharmacists' roles in addressing opioid-related mortality (17) • Limited public demand and supply challenges limit naloxone availability. • Macro-level strategies such as academic detailing and implementing a universal precautions approach may be useful to systematize naloxone distribution, increase dispensing and reduce stigma among specific population groups such as people who inject drugs.
• For what types of substances ○ Opiates • In what settings ○ Acute care settings	Medium	*Focus of study:* To characterize barriers and facilitators for emergency-department initiated buprenorphine to inform future	Emergency department-initiated buprenorphine to treat opioid-use disorder (OUD).	Emergency department–initiated buprenorphine adoption among ED pharmacists faces barriers including varied pharmacist experience, protocol gaps and occasional absence, underscoring the need for additional training, inter-

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

• Using what interventions/approaches
  ○ Prescribing, deprescribing, tapering or adapting/renewing medication-assisted therapies
• Using what mode of delivery
  ○ In-person
		implementation efforts and enhance access to this highly effective opioid-use disorder treatment
		
		Publication date: 2023
		
		Jurisdiction studied: United States
		
		Methods used: In-depth semi-structured focus groups and interviews
				departmental collaboration, and strategies such as clear protocols and continuous pharmacist presence (34)

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacies
• Using what interventions/approaches
  ○ Supporting harm-reduction approaches including naloxone education, drug checking and clean needle distribution
	Medium	*Focus of study:* To develop a single-session strategy for implementing take-home naloxone by community pharmacists
		
		Publication date: 2023
		
		Jurisdiction studied: Australia
		
		Methods used: Participatory qualitative methods involving a workshop involving pre-mortem exercise and design thinking principles to develop messages and dissemination methods
			Eight pharmacists, four pharmacy owners, two employee pharmacists, one country locum pharmacist and one professional services manager for a pharmacy group. Campaign messages to promote the implementation of take-home naloxone by community pharmacists.	A theoretically informed, participatory-designed, single-session implementation strategy using a video to increase community pharmacists' implementation of naloxone can address known barriers through education, modelling, persuasion and incentives, but additional multilevel strategies and creative inquiry in future implementation efforts are needed (35)

• For what types of substances
  ○ Opiates
• In what settings
  ○ Community pharmacists
• Using what interventions/approaches
  ○ Patient education and supporting self-management
  ○ Supporting harm-reduction approaches including naloxone
	Medium	*Focus of study:* To assess pharmacists' attitudes on recommending naloxone
		
		Publication date: 20 December 2019
		
		Jurisdiction studied: Massachusetts and Rhode Island
		
		Methods used: Cross-sectional
			A total of 402 pharmacists completed the survey. Participants were primarily 45–64 years old, female and Caucasian.	Access to naloxone in pharmacies can help overdose prevention by increasing access to services and awareness of risks in pharmacists and the general public (36)
				Over half of pharmacists reported never dispensing naloxone, but those who did dispense felt that it helped prevent overdoses and increase public awareness of naloxone.

Dimension of the organizing framework	Relevance rating	Study characteristics	Sample and intervention description	Declarative title and key findings

education, drug checking and clean needle distribution
• Using what mode of delivery
  o In-person
• Outcomes
  o Health outcomes
▪ Substance use
  o Care experiences
▪ Access to care
  o Provider experience				

Appendix 7: Documents excluded at the final stage of reviewing

Document type	Hyperlinked title
Evidence syntheses	Educational programs implemented for pharmacists after state passage of a standing order for naloxone: A systematic review of current practices
	A review and narrative synthesis of community pharmacist-led interventions to tackle medicines for pain that are misused
Single studies	Designing a patient-centered opioid misuse screening and brief intervention for the community pharmacy
	Opioid misuse and overdose: Changes in pharmacist practices and outcomes

Waddell K, Demaio P, Bain T, Ali A, Jaspal A, Wilson MG. Rapid synthesis: Examining pharmacist interventions for supporting individuals with substance-use disorder. Hamilton: McMaster Health Forum, 15 December 2023.

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