Key Priorities to Implement Deprescribing in Primary Health Care in Nova Scotia:

Results from the Deprescribing in Primary Health Care in Nova Scotia Knowledge Exchange Event (June 20, 2019)

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Disclaimer

During the Knowledge Exchange Event reasonable efforts were made to monitor participation to ensure participants stayed on topic, were courteous and respectful in their comments. The views expressed in this publication do not necessarily reflect the views of all participants, team members or their affiliations, but rather should be viewed as a summary of the Knowledge Exchange Event. A glossary of relevant terms is shown in **Appendix A.**

Funding

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Executive Summary

WHAT? An interactive in-person knowledge exchange event (KEE) was held to identify priorities for the development and implementation of collaborative deprescribing strategies in primary healthcare in Nova Scotia that took place on June 20, 2019 at Dalhousie University, Halifax Nova Scotia.

WHO? Patient advisors, representatives from nursing, pharmacy, family medicine (front line healthcare providers, and members of advocacy/regulatory bodies) and government/policy representatives.

WHY? Inappropriate medication use and polypharmacy are associated with increases in adverse drug reactions, hospitalizations and mortality. Deprescribing, the planned and supervised process of dose reduction or stopping of medication(s) that may be causing harm or are no longer causing benefit, may improve medication use and patient outcomes.

HOW (Figure 1)?

- Prior to the KEE, participants received summaries of a scoping review of the international literature on deprescribing and results of a local qualitative study (interviews and focus groups with local primary healthcare providers) about deprescribing. Participants voted on the top areas of interest using a modified Delphi survey of two rounds.
- The top areas of interest were then used as the topics for discussion at the KEE using a World Café approach. Discussions occurred in small groups that had representatives from all participant groups circulating through the topics.
- Table discussions were briefly summarized into themes and presented back to participants for ranking through a modified Nominal Group Technique.
- Key priorities that need to be addressed to implement deprescribing strategies in Nova Scotia were identified (Figure 2).

Figure 1: Knowledge Exchange Event Process

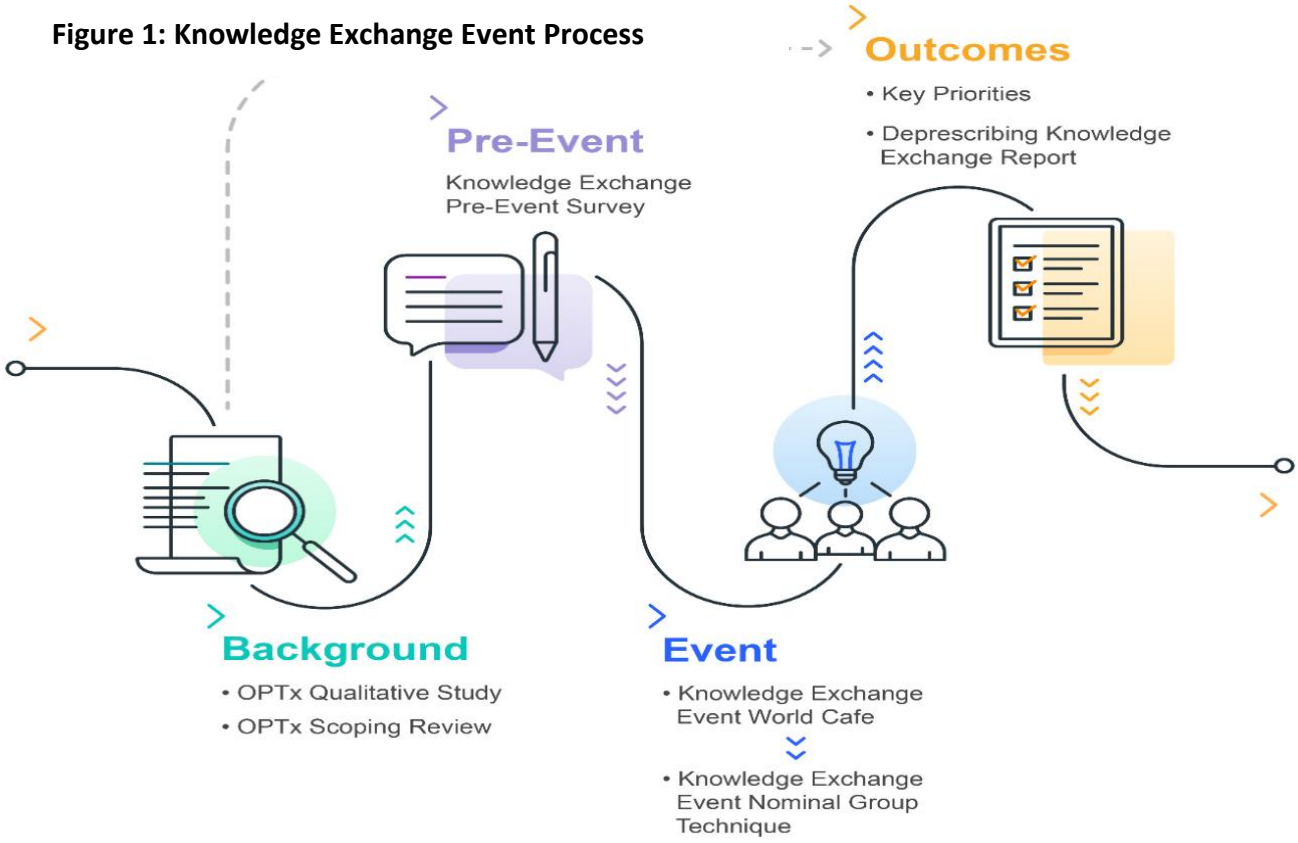
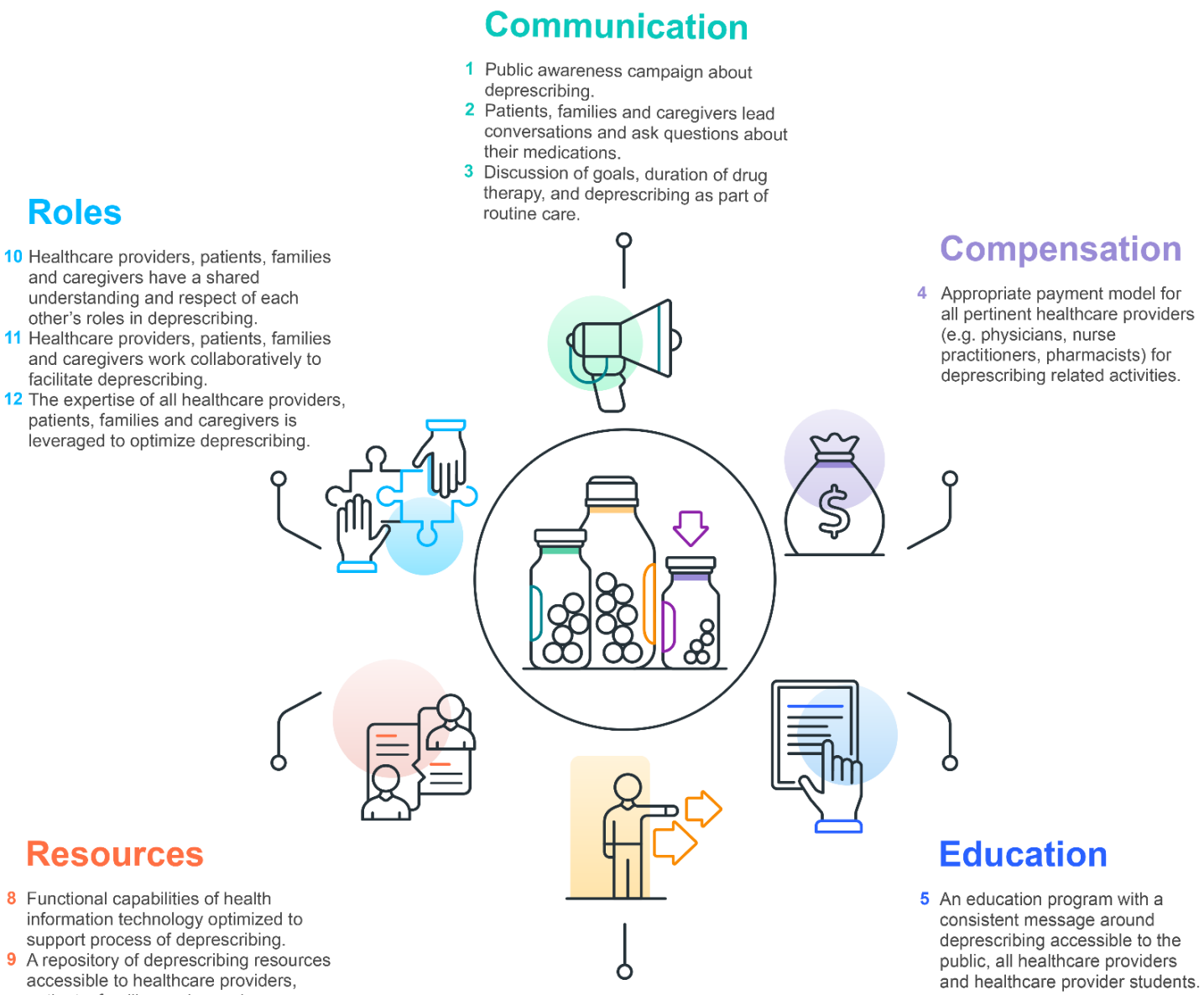


Figure 2: Key priorities that need to be addressed to implement deprescribing strategies in primary care in Nova Scotia



Background

Issue to be Addressed

Inappropriate medication use and polypharmacy are health-related priorities because of the associated increases in adverse drug reactions (ADRs), hospitalizations and mortality.[1,2] Polypharmacy, the use of multiple medications, typically five or more, is prevalent in the older population and data suggests that one in five prescriptions for older adults living in the community is inappropriate (the harms outweigh the potential benefits).[1,3,4] Given the potential risks, it is important to find ways to manage inappropriate medication use.[2] Deprescribing is the planned and supervised process of dose reduction or stopping of medication(s) that may be causing harm or are no longer causing benefit.[5] Deprescribing is gaining momentum around the world in an effort to decrease medication morbidity in the older adult population.[5] Deprescribing has been found to decrease the use of medications and medication costs and is expected to improve clinical outcomes with longer term studies.[2,6]

The act of stopping medications that have been prescribed, often for years, is complicated by many factors related to prescribers, patients, and systems.[7,8] Systematic reviews have identified and described prescriber reported barriers to deprescribing, such as lack of awareness and clinical inertia, and by patients, such as fear and being unsure about the process of deprescribing.[7,8] A variety of interventions and initiatives have been developed and implemented to improve uptake, including deprescribing guidelines, decision support tools and dedicated staff following a systematic deprescribing process.[6,9,10] Patient-directed strategies have also been studied using information leaflets outlining harms of medications to increase patient awareness and willingness toward deprescribing.[11–13] However, the interventions may not address the barriers to deprescribing in an individual practice and uptake of some deprescribing initiatives has been reported to wane over time.[6,9] The limitations and complexity previously identified in implementing deprescribing initiatives speaks to the need for exploration of barriers and opportunities in a local context and developing and prioritizing potential strategies with stakeholders.

Research Knowledge

The OPTx Team

The OPTx team is made up of two Co-Principal Investigators from Dalhousie's College of Pharmacy, along with multiple Co-Investigators from organizations such as the University of South Australia, Dalhousie School of Nursing, the Department of Family Medicine, Nova Scotia Health Authority, W.K. Kellogg Library, and Dalhousie's College of Pharmacy. The team is also supported by a research coordinator and research assistants.

The OPTx team has completed two background projects:

1) a scoping review (international literature) and,
2) qualitative study of local primary healthcare providers (local context).

The aim of the ***scoping review*** (conducted using the Arksey and O'Malley framework[14]), was to identify and categorize strategies for deprescribing in primary care that have been investigated and map the results to the behaviour change techniques and interventions in the Behaviour Change Wheel (BCW).[15] As deprescribing is a complex behaviour, categorization with the BCW aids in identifying behaviours that may be targeted for design of future deprescribing strategies and implementation. The most predominant Behaviour Change Technique (BCT) found in the scoping review was *adding objects to the environment*, such as therapeutic algorithms made available to clinicians.[16–18]

The aim of the ***qualitative study*** was to describe the knowledge, attitudes, beliefs and behaviours towards deprescribing of primary healthcare providers (family physicians, nurse practitioners and pharmacists) in Nova Scotia. Nine interviews and three uniprofessional focus groups were conducted and themes, including enablers and barriers, were identified using the **Theoretical Domains Framework** version 2 (TDF(V2)).[19] Four significant domains were identified: 1. Social Influences; 2. Environmental Context and Resources; 3. Memory, Attention, and Decision Processes; and 4. Intentions.

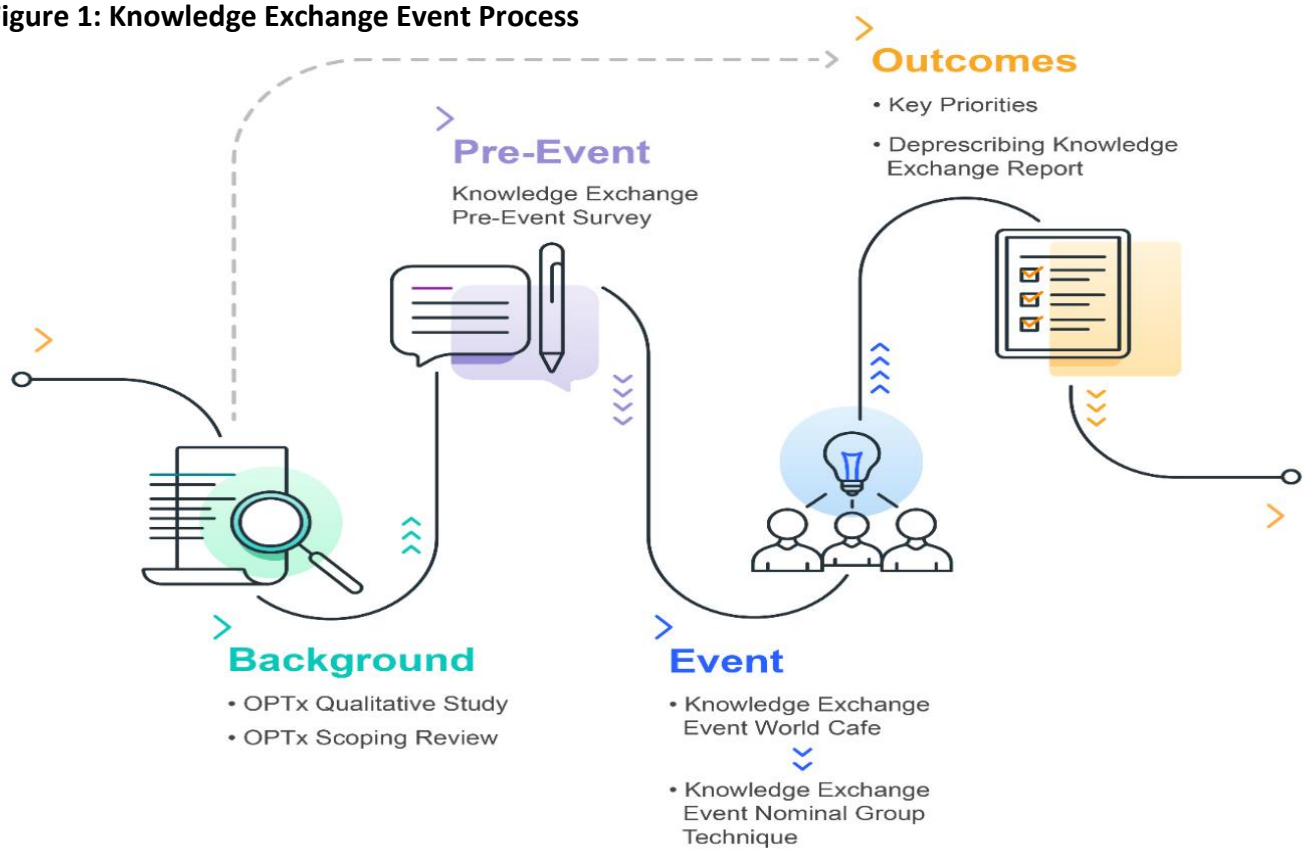
Deprescribing Knowledge Exchange Event

Objectives

Objective 1: To share the results of the scoping review and the qualitative study with stakeholders using an engaging and interactive approach - *transfer of knowledge from researchers to stakeholders.*

Objective 2: To identify priorities for the development and implementation of collaborative deprescribing strategies in primary healthcare in Nova Scotia - *transfer of new knowledge created from stakeholders to researchers.*

Figure 1: Knowledge Exchange Event Process



Participants

Stakeholders identified through team discussions and consultation with professional advocacy and regulatory bodies and government/policy groups were invited to take part in the event. Participants were recruited based on the 5 participant groups listed below.

Table 1: Participant Groups and Numbers

Participant Group	Representatives Included in Group	Number of Participants in Group
Patient Advisors	Citizen and Patient Representatives	5
Nursing Related Participants	Nurse Practitioners; Family Practice Nurses	5
Pharmacy Related Participants	Pharmacists	5
Physician Related Participants	Family Physicians	3
Government/Policy Participants	Health Services and/or Policy Representatives; Professional Associations (e.g. Pharmacy Association of Nova Scotia)	4

A total of 25 participants were invited, with 22 participants attending the half day event.

Pre-Event

Prior to the event all participants were emailed a summary of the OPTx team's scoping review and qualitative study to provide background information on the research results. The summaries consisted of two-page documents based on the main themes of the TDF(v2) that were identified in the qualitative study combined with the BCTs identified in the scoping review. (**Appendix B**).

Participants were asked to complete two online surveys on separate occasions to rank topics from the summaries using a structured communication method (a modified Delphi method)[20,21] according to what they perceived as most important or relevant. The results of the surveys (**Appendix C**) helped to identify and focus the specific topic areas to discuss during the event based on importance or relevance to stakeholders.

Deprescribing Knowledge Exchange Event

An interactive in-person knowledge exchange event was held on Thursday, June 20, 2019 at Dalhousie University to identify priorities for the development and implementation of collaborative deprescribing strategies in primary healthcare in Nova Scotia. The day was structured as follows:
1) An introduction to the topic of deprescribing;
2) Further information about the background study results;
3) Small group World Café discussions; and
4) Prioritization of deprescribing areas.

World Café

A World Café approach was used to facilitate discussion. Participants were divided into five small groups to discuss the topics identified by the pre-meeting survey. Groups contained at least one representative from each of the stakeholder groups to ensure diverse perspectives and open-ended discussions. See **Appendix D** for Event Agenda.

Groups rotated every 20 to 25 minutes to each of the 5 table topics:

- Collaboration
- Education and Training
- Health Technologies
- Identifying Patients
- Patient Goal Setting

A facilitator and note taker were present at each table for the discussions. Facilitators welcomed participants to each table, introduced the key questions to be discussed (see **Appendix E**) and summarized discussion points from previous groups who had been at the table. Discussions were captured on flip charts at each of the tables as well as electronically by note takers. The table notes from each World Café topic were summarized in real time by the research team.

After the groups had rotated to all 5 table topics, the research team reviewed the results of the table discussions and synthesised key themes for ranking (while participants were on a refreshment break).

Ranking of Discussion Themes

The key themes that were identified during the World Café were then presented to the whole group for final discussion and questions. Participants were asked to anonymously rank their top ten themes, out of fourteen, to inform priorities for future deprescribing strategies in Nova Scotia. Participants were asked to consider the APEASE Criteria (Affordability, Practicability, Effectiveness and cost-effectiveness, Acceptability, Side Effects/Safety and Equity)[15] for designing and evaluating interventions when ranking the discussion themes. See **Table 2** for Priority Ranking results.

Table 2: Rankings of World Café Themes by Participants

1. Educating all healthcare providers (and students) around deprescribing through reputable sources (e.g. academic detailing, professional associations)
2. Patient education campaign to raise awareness and empower patients to self-identify/advocate for themselves; clear education around potential benefits. Means of communication could include media, social media, travelling public forums, and existing events.
3. Collaborative interprofessional annual medication reviews to identify opportunities for deprescribing; with schedule developed for deprescribing with timelines and who is responsible
4. Communication - making deprescribing part of the prescribing conversation, including diagnosis (suspected diagnosis) on prescriptions, labels, so all team members and patients can advocate
5. A collaborative tool or system that promotes healthcare providers and patients working together (and related education to use the tool/system)
6. Pharmacist led medication reviews in collaboration with physicians, nurses/nurse practitioners and patients
7. Patient-focused tool/system/resource to allow patients to access information about their medications and deprescribing information, so they can lead conversations
8. Improved use and integration of current tools (Drug Information System with complete medication information)
9. Optimal use of alerts/prompts within tools/systems/electronic medical records that assist in identification of candidates for deprescribing (e.g. 10+ medications, certain medications (e.g. opioids), specific doses, annual reminder for medication review, hospital discharge, physician to prompt to see pharmacist for medication review)
10. Champion within the team who leads the medication reviews and identified opportunities for deprescribing
11. Development and understanding of the roles of different providers in the process for all providers and patients
12. Compensation for providers (physicians, pharmacists, NPs/nurses) to identify patients and complete deprescribing (fees for deprescribing appointments)
13. Discussion guide for clinicians and patients to focus discussions on medications
14. "Well Seniors" visits and as an option to help with medication discussions and goal setting

Post-Event Participant Feedback

A follow up survey was sent to participants to assess the event. Based on the responses, participants were very satisfied with the event, including in areas such as pre-event communication, introduction material on the day of the event, ability to be part of the discussion, group facilitation, ranking of priorities and the location of the event. Participants also made positive comments around the background knowledge that was included that flowed well into the information presented, the great participant diversity, organization and execution of the event, and how the event exceeded expectations. Areas for improvement included providing more time for discussion and to use a location with better sound and less harsh lighting. The evaluation questionnaire and responses can be viewed in **Appendix F**.

Identification of Key Priorities

Following the Knowledge Exchange Event summaries from each of the tables and the ***ranked discussion themes*** were used to create ***key priorities*** that need to be addressed to implement deprescribing strategies in Nova Scotia. Evidence to help inform the key priorities was also identified and summarized.

Feedback From Stakeholders of Key Priorities

In order to ensure the interpretation of discussion notes and identification of key priorities was accurate, participants who attended the Knowledge Exchange Event were sent a copy of the key priorities and a questionnaire to provide feedback. Ten participants responded and felt the draft report resonated with their experience and were in agreement with the key priorities as stated.

Key Priorities

Overall six themes were identified from table discussions with accompanying key priorities that need to be addressed to implement deprescribing strategies in Nova Scotia. These included: **Communication, Compensation, Education, Prompts, Resources and Roles**.

Communication

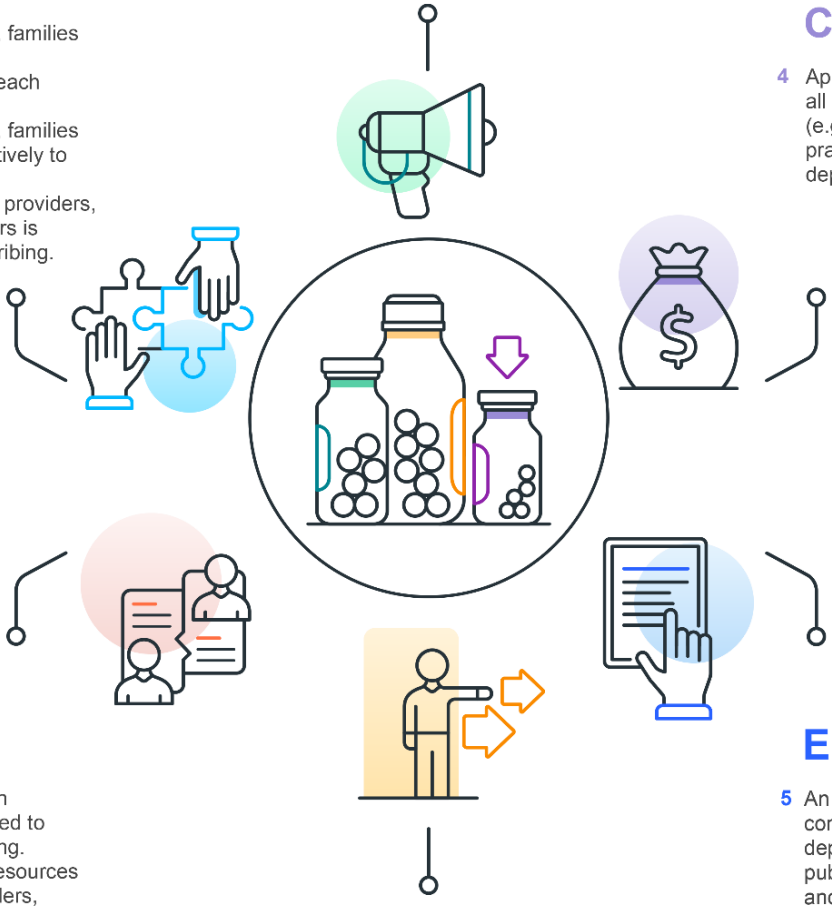
1 Public awareness campaign about deprescribing.
2 Patients, families and caregivers lead conversations and ask questions about their medications.
3 Discussion of goals, duration of drug therapy, and deprescribing as part of routine care.

Roles

10 Healthcare providers, patients, families and caregivers have a shared understanding and respect of each other's roles in deprescribing.
11 Healthcare providers, patients, families and caregivers work collaboratively to facilitate deprescribing.
12 The expertise of all healthcare providers, patients, families and caregivers is leveraged to optimize deprescribing.

Compensation

4 Appropriate payment model for all pertinent healthcare providers (e.g. physicians, nurse practitioners, pharmacists) for deprescribing related activities.



Resources

8 Functional capabilities of health information technology optimized to support process of deprescribing.
9 A repository of deprescribing resources accessible to healthcare providers, patients, families and caregivers.

Education

5 An education program with a consistent message around deprescribing accessible to the public, all healthcare providers and healthcare provider students.

Prompts

6 Electronic health systems provide prompts to initiate deprescribing.
7 Healthcare providers, patients, families and caregivers routinely identify opportunities for deprescribing.

Key Priorities: Supporting Details

Below are the key priorities for each of the six main themes. Following each Key Priority is:
1) a brief summary of findings from the table discussions used to support identification of the key priority; and
2) corroborating evidence from the literature that may further inform deprescribing strategies related to key priority. Specific strategies identified during the Knowledge Exchange Event for each key priority are presented in Appendix G.

Communication

Key Priority # 1: Public awareness campaign about deprescribing.

Discussion Summary: Participants highlighted a need for public awareness around deprescribing and the terms used (e.g. deprescribing, polypharmacy), as this is not a well-known topic. Various strategies are needed for disseminating information about deprescribing. Examples discussed included a public awareness campaign and signage in partnership with public organizations, such as Canadian Association of Retired Persons, and government of Nova Scotia websites to raise public awareness.

Informing Evidence: *Stakeholders from Australia suggest that raising awareness of patients about polypharmacy and deprescribing, as well as providing tools to help them discuss issues with their healthcare providers, could improve quality use of medications.*[22] *There are currently various credible websites accessible to the public on deprescribing, including Deprescribing.org,*[23] *SaferMedsNL,*[24] *and Sleepwell.*[25] *The EMPOWER study provides an example of raising public awareness about the harm of long-term benzodiazepine use. In this study the use of patient directed brochures resulted in more conversations about benzodiazepine cessation and a number of benzodiazepines discontinued.*[11,26,27]

Key Priority # 2: Patients, families and caregivers lead conversations and ask questions about their medications.

Discussion Summary: Participants discussed encouraging patients to be champions in their healthcare specifically in deprescribing and empowering them to have conversations and ask questions with their healthcare providers (physicians, pharmacists, etc.). Deprescribing can be facilitated by patients being advocates for themselves and buying into the idea in order to self-identify medications they can reduce.

Informing Evidence: *The scoping review identified a number of deprescribing strategies that involved increasing patient interest to drive the deprescribing process.* [11–13,26–30] *Examples of such strategies included sending invitational letters or patient information leaflets to patients to increase awareness of potential harms of medications,*[11–13,26–30] *as well as using peer-champion stories about successful deprescribing in other patients to encourage deprescribing initiation by patients' themselves.*[11,26,27] *Local healthcare providers expressed that patient's interest in deprescribing can help drive the process [Qualitative study]. The role of patient preference has been advocated in the literature,*[31] *and the process of shared-decision making between healthcare providers and patients in deprescribing highlights the importance to include patients in the conversation.*[32,33] *Policymakers from the Institute of Medicine in the United States have encouraged older patients to take a leadership role in the management of medications that impair cognitive function.*[34]

Key Priority # 3: Discussion of goals, duration of drug therapy, and deprescribing as part of routine care.

Discussion Summary: Participants discussed the need to change conversations and attitudes around medications including reviewing indications, when to stop, adverse effects, and when to have medications reassessed. Participants highlighted the need for clearer information on prescriptions as well as communication with patients and other care providers to identify deprescribing needs. An example discussed was to discuss future deprescribing when new medications are started, such as how long they will need to take the medication and when reassessment should occur.

Informing Evidence*: The OPTx scoping review identified deprescribing strategies that involved setting goals for medications with patients and using their treatment priorities to make decisions on deprescribing.*[35–38] *In another study, patients indicated that reasons for deprescribing should be addressed clearly, as patients are hesitant to stop medications that are perceived to be useful and are more willing to stop medications that no longer provide benefit.*[39]

Compensation

Key Priority # 4: Appropriate payment model for all pertinent healthcare providers (e.g. physicians, nurse practitioners, pharmacists) for deprescribing related activities.

Discussion Summary: Participants discussed the need for incentives or (better) compensation models for pharmacists, physicians, and nurse practitioners to set aside time to complete medication reviews and deprescribe. Participants highlighted the lack of time and billing codes to allow for medication reviews. The Provincial Government was identified as a necessary funding partner and also the group responsible for creating a system that could proactively address deprescribing.

Informing Evidence: *Deprescribing can be a time intensive task (conducting a medication history, identifying inappropriate medications, shared decision making with the patient, planning and monitoring during withdrawal). Local healthcare providers indicated that lack of adequate reimbursement for deprescribing can hinder the process [Qualitative study]. Adequate reimbursement has been described by healthcare providers and policymakers as enablers to deprescribing in the literature.*[40,41] *The importance of promoting reimbursement for deprescribing by a multidisciplinary team was emphasized in one study.*[31] *This is supported by other jurisdictions, as stakeholders from Australia have called for providing incentives to healthcare professionals for quality use of medications in older adults.*[22]

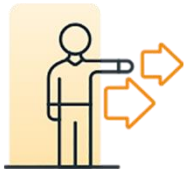
Education

Key Priority # 5: An education program with a consistent message around deprescribing accessible to all healthcare providers, healthcare provider students and patients/families/ caregivers.

Discussion Summary: Participants suggested that healthcare providers and students need to have better education around deprescribing to understand the relevant concepts and available resources. Participants also indicated that collaborative education on deprescribing could involve all stakeholders including healthcare providers, students, as well as, patients/families/caregivers in events such as public forums to discuss deprescribing. Participants also discussed the need for education around use and set up of accounts for existing prescribing/health tracking systems (EMR/MyHealthNS, PrescribeIT) and how they can best be used by each stakeholder. It was felt that all education should be provided by unbiased, credible sources such as academic detailing.

***Informing Evidence**: The scoping review identified a number of strategies that involve education of the public around deprescribing, with content of the education including harms of polypharmacy,*[9,11,26,27,30,42–45] *realistic goals of deprescribing,*[35] *as well as timelines of medication discontinuation by providing a tapering schedule.*[9,11,12,26,27,29] *One study highlighted the need for patient-centred deprescribing through patient education about risks and benefits of ongoing medication use,*[8] *and another suggested that patient education may be necessary to increase deprescribing in practice.*[46] *Local healthcare providers expressed the need for a systematic process for deprescribing, which can potentially be facilitated by providing education and training [Qualitative study]. The scoping review identified deprescribing strategies that involved education of healthcare providers and students, including training on conducting patient interviews*[30,35,44] *using case studies*[47,48] *or simulated patients,*[35] *as well as training on using tools developed for deprescribing.*[16,18,49] *Academic detailing related to deprescribing delivered by a pharmacist or other prescriber has been studied*[42,43,50,51] *and has been suggested by several studies as a way to improve prescribing and reduce medication-related harms.*[3,7,52,53] *Integrating principles of deprescribing into student's curriculum has been advocated to improve prescriber's self-efficacy.*[40]

Prompts



Key Priority # 6: Electronic systems prompt to initiate deprescribing.

Discussion Summary: Participants discussed having notifications or pop-ups set up for all individuals involved including healthcare providers and patients/families/caregivers, that are integrated within existing information technology systems (i.e. EMR/MyHealth, pharmacy software) to aid in deprescribing. Specific notifications discussed were duration of medication use, adverse effects, change in renal function, specific at-risk medications (e.g. proton pump inhibitors, benzodiazepines), combinations of medications (e.g. resulting in drug interactions), or when action is required.

***Informing Evidence**: Local healthcare providers indicated that alerts in the EMR would facilitate deprescribing but the lack of consistent use of EMRs could be a barrier [Qualitative study]. The scoping review identified the use of prompts in various formats, including mailing letters to prescribers who had patients on potentially inappropriate prescriptions (PIPs),[54] incorporating prompts in the form of a pop-up into electronic medical records (EMR) when patients meeting specific deprescribing criteria were seen,[9,16] as well as generating reports to identify patients who met criteria for deprescribing.[38,42,43,55] Additional studies have suggested that tools such as EMR alerts could be implemented to reduce prescribing of PIPs,[56,57] as well as leveraging existing tools to identify patients with high-risk conditions.*[31]

Key Priority #7: Healthcare providers, patients, families and caregivers routinely identify opportunities for deprescribing.

Discussion Summary: Participants highlighted opportunities for deprescribing, including, 1) targeted medication reviews; 2) initial and refill of prescriptions; 3) transitions in care; 4) patient-led opportunities and 5) other clinical opportunities. For targeted medication reviews, participants discussed opportune circumstances for deprescribing such as in those taking 10 or more medications, or by creating a culture where medication reviews are annual events such as dental visits. Participants highlighted opportunities to discuss deprescribing during initial prescribing and refill of prescriptions and transitions in care such as hospital discharge. Patients may lead deprescribing opportunities with the assistance of apps that allow them to track their medications and receive reminders to have medication reviews each year. Clinical opportunity suggestions included group medical visits with multiple providers to ensure appropriate care and treatment for the patient's needs, and an improved medication review process to tackle deprescribing effectively. An example of a potentially effective process discussed was to start medication reviews for individuals who are currently taking 10-15 medications.

Informing Evidence: *The scoping review found various strategies around identifying routine opportunities for deprescribing, such as focusing on a specific class of medications only, such as benzodiazepines*[11,12,26–29,44,57,58] *and proton pump inhibitors (PPI);*[9,30,45,49] *generating reports of patients who met certain criteria for deprescribing (e.g. age 65 and above on five or more medications, on PPI for longer than eight weeks)*[38,42,43,55] *and generating reports for prescribers on their PIP prescribing patterns.*[47,48,50,51] *Local healthcare providers regarded certain drug classes, patient factors, and polypharmacy as triggers to identify candidates for deprescribing [qualitative study]. Additional studies have supported transitions of care as potential routine opportunities for medication reviews and deprescribing, such as hospital discharge.*[32,59] *Others have suggested regular medication reviews (e.g. annually) to increase deprescribing opportunities.*[7,60,61] *Some studies have suggested restrictions such as quantity or refill limits, and requiring review for indication of use could potentially facilitate safer use of medication and conversations about deprescribing.*[40]

Resources

Key Priority #8: Functional capabilities of health information technology optimized to support process of deprescribing.

Discussion Summary: Participants highlighted the need for an integrated system where patient and provider information is accessible to all healthcare team members (including patients). The potential for building on current systems' capabilities (e.g. Drug Information System) to create a common health record was also included in the discussion. Participants discussed the need for a centralized source to host information and possibly integrate the use of existing health data (e.g. Fitbit, cellphone tracking data). The location of patient resources was also discussed primarily to place in central areas such as physicians' offices that will help prompt and facilitate conversations around deprescribing during appointments.

Informing Evidence*: Local healthcare providers expressed the need for a communication system accessible to all healthcare providers within the circle of care, in order to have access to complete and accurate documentation to facilitate deprescribing [Qualitative study]. One study suggested an integrated EMR system across different sites could potentially facilitate deprescribing.*[31] *Policymakers have called for the optimization of existing health information technology resources, such as interoperability of medical and pharmacy records, to facilitate collaboration, communication, and coordination in deprescribing.*[22,40] *Smartphone apps have been suggested as an option to improve communication between patients and healthcare providers, help patients understand their medications, and as a record for medications.*[59]

Key Priority #9: A repository of deprescribing resources accessible to healthcare providers, patients, families and caregivers.

Discussion Summary: Participants discussed the need to understand what the best resources are for deprescribing and that they should be available to all. There is a need to collate existing evidence-based information and create one website or portal to host all deprescribing content and resources that are user friendly for all audiences. Also discussed was the option to explore mediums to ensure access to content (Twitter, handouts, infographics, websites, apps, etc.)

Informing Evidence: *Local healthcare providers suggested the use of evidence-summary resources such as RxFiles and UpToDate helped facilitate deprescribing [qualitative study]. The scoping review found that different deprescribing resources were studied, including medication lists (such as the Beers Criteria®[48,62,63]), therapeutic treatment algorithms (such as STOPP/START[16–18]), point-of-care tools (such as the Outcome Prioritisation Tool[37]), and patient decision aids (such as the EMPOWER brochure[11,26]) to support the deprescribing process. There are currently a variety of online deprescribing resources and tools available to healthcare providers and patients, such as Deprescribing.org,[23] SaferMedsNL,[24] Sleepwell[25]), and point-of-care tools (such as MedStopper).*[64]

Roles

Key Priority #10: Healthcare providers, patients, families and caregivers have a shared understanding and respect of each other's roles in deprescribing.

Discussion Summary: Participants discussed how roles and responsibilities need to be defined so everyone involved is collectively working together in deprescribing. Discussions focused heavily on the misinformation around roles and responsibilities of each profession and shifting the focus to integrate and involve pharmacists and patients in the responsibility of medication reviews.

Informing Evidence: *Local healthcare providers indicated that deprescribing was part of their professional role, and there was a role for patient advocacy regarding deprescribing [qualitative study]. Studies have found that healthcare providers recognize deprescribing as part of their professional role*[41] *and policymakers support a deep understanding of professional roles to enable interdisciplinary deprescribing.*[40]

Key Priority #11: Healthcare providers, patients, families and caregivers work collaboratively to facilitate deprescribing.

Discussion Summary: Participants described the need for collaboration and enhancing collaborative practice to support deprescribing. Participants felt that integrated multidisciplinary, collaborative teams, when possible, were likely to enhance deprescribing, ensuring that all teams include pharmacists and patients. The Health Home Model[65] was discussed as an example that includes an interprofessional team approach. Other models should also be reviewed as examples of best practices.

Informing Evidence: *Local healthcare providers expressed the desire to work collaboratively with other healthcare providers on deprescribing because of the extra support they could receive from each other [qualitative study]. The scoping review identified a collaborative approach to deprescribing mainly in the form of multidisciplinary teams consisting of physicians, nurses, and pharmacists.*[13,58,66] *Stakeholders from Australia have encouraged patient empowerment for more collaborative medication review.*[22]

Key Priority #12: The expertise of all healthcare providers, patients, families and caregivers is leveraged to optimize deprescribing.

Discussion Summary: Participants highlighted the need to increase awareness and utilize pharmacist involvement as a resource to deprescribing. Pharmacists are available to patients to discuss their prescriptions and offer appointments, but patients are unaware that this service is available to them. Other professionals were also highlighted, such as nurse practitioners to aid in medication reviews for deprescribing.

Informing Evidence: *Although the scoping review identified many deprescribing strategies that focused on physicians, many were found that involved additional healthcare providers, such as pharmacists performing medication reviews and providing recommendations to physicians,*[27,36,42,43,51,62,66–69] *a specialized nurse advisor clinic for deprescribing PPIs,*[45] *and primary care pharmacist and nurse medication reviews and patient consultations.*[28] *Other studies have also shown that pharmacists and specialist nurses are enablers to deprescribing.*[7,59,61,70] *Some studies have suggested a team based process where a pharmacist initiates deprescribing by identifying inappropriate prescribing, determining the deprescribing process with patients and prescribers, and then having a nurse follow-up.*[40,46]

Conclusion

Through the knowledge exchange event, the OPTx Team was able to achieve its two objectives. The team disseminated the results of the local qualitative study with primary care providers and the scoping review of international evidence. Participants, who may be involved in future deprescribing strategies, applied this information to generate discussion during the World Café. Themes derived from the discussion tables were presented for review and then ranked by the participants. Key priorities and informing evidence were identified based on table discussions and rankings. This knowledge exchange event with stakeholders has identified key priorities that need to be addressed to implement widespread and sustainable deprescribing strategies in Nova Scotia.

Appendix A – Glossary

Behaviour: the way in which an individual conducts themselves or behaves.[71]

Behaviour Change Wheel: was developed from 19 frameworks of behaviour change identified in a systematic literature review. It consists of three layers. The hub identifies the sources of the behaviour that could prove fruitful targets for intervention. It uses the COM-B ('capability', 'opportunity', 'motivation' and 'behaviour') model. This model recognises that behaviour is part of an interacting system involving all these components. Interventions need to change one or more of them in such a way as to put the system into a new configuration and minimise the risk of it reverting. Surrounding the hub is a layer of nine intervention functions to choose from based on the particular COM-B analysis one has undertaken. The outer layer, the rim of the wheel, identifies seven policy categories that can support the delivery of these intervention functions.[15]

Caregiver: a person who provides care. Also see 'Families' and 'Patients'

Collaboration: to work jointly with others or together.[72]

Communication: the act or process of transmitting information (as about ideas, attitudes, emotions, or objective behaviour).[73]

Compensation: payment for an object of value tendered or a service rendered.[74]

Deprescribing: The planned and supervised process of dose reduction or stopping of medication(s) that may be causing harm or are no longer causing benefit.[5]

Education: Increasing knowledge or understanding.[15]

Electronic Health Systems: electronic systems used by the healthcare system and practitioners that store health information (e.g. electronic health records – capture patients health history through a secure computer system). Also see 'Health Information Technologies'.

Families: a group of people or unit that has relational ancestry. Also see 'Caregivers' and 'Patients'.

Government/Policy participants: personnel who are employed in positions of government or have roles or influences in policies, both politically or organizational. This includes health services and/or policy representatives and professional associations (e.g. Pharmacy Association of Nova Scotia).

Health Information Technologies: electronic systems used by the healthcare system and practitioners that store health information (e.g. electronic health records – capture patients health history through a secure computer system). Also see 'Electronic Health Systems'.

Healthcare provider: an individual regulated professionally to provide healthcare. For example, this can include registered nurses, pharmacists, physicians, psychologists, etc.

Modified Nominal Group Technique: a structured group interaction consists of 4 stages: silent generation, round robin, clarification and voting (ranking or rating).[75]

Nursing related professions: a licensed health-care professional who provides care and skilled in promoting and maintaining the health of individuals, families and communities, including nurse practitioners, registered nurses and family practice nurses.

Patients: an individual who seeks or is in need of medical care or treatment. Also see Caregiver and Families.

Patient Advisors: individuals with experiences with healthcare and seek to make changes or improvements, includes Citizens and Patient representatives. Also see Patients, Caregiver and Families.

Patient Goal Setting: a process in which a patient sets attainable goals that can be measured and evaluated in aims of improving outcomes.

Pharmacist: a health care professional who are medication experts and provide a wide range of health care services. This includes community pharmacists.[76]

Physician: a licensed individual qualified to practice medicine, which includes family physicians and general practitioners.

Prompts: a notification or pop-up, often auto-generated in computer based systems, to draw attention of the user to a particular item or message.

Resources: a source of information or expertise.[77]

Roles: a function or part performed especially in a particular operation or process.[78]

Scoping Review: an approach to reviewing existing literature, and examining the extent, range and nature of conducted research activities, to identify research gaps, and summarising and disseminating findings, based on the Arksey and O'Malley framework.[14]

Theoretical Domains Framework: an integrative framework developed from a synthesis of psychological theories as a vehicle to help apply theoretical approaches to interventions aimed at behaviour change.[19]

Training: Imparting skills.[15]

World Café: a methodology focused on group dialogue which focuses on five key areas including, the setting, welcome/Introduction, small group rounds, questions, and reflection.[79,80]

Appendix B – Two Page Topic Summary Handouts

Environmental Context and Resources Handout

Deprescribing in Primary Care in Nova Scotia

The OPTx Knowledge Exchange Event aims to share research results from three projects (1. Qualitative Study, 2. Literature Review, and 3. Linking of Qualitative Study and Literature Review) with local stakeholders to prioritize potential deprescribing strategies for implementation in primary care in Nova Scotia.

Project 1: Qualitative Study

Interviews and focus groups were conducted with physicians, pharmacists and nurse practitioners to gather their perspectives on influencers of deprescribing in their practice. Results were categorized using a validated framework for behavior change at all levels (individual, practice, health system) called the Theoretical Domains Framework (TDF).[1]

This 2 page summary focuses on **Environmental Context and Resources** domain of the TDF.

What is Environmental Context and Resources?

"Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence and adaptive behaviour."

What We Heard from Local Healthcare Providers

Facilitators

- Availability of deprescribing tools and resources
- Alerts in electronic medical records to facilitate deprescribing
- A team based approach to aid the deprescribing process

Barriers

- Lack of practice standards for deprescribing in primary care
- Lack of documentation of a complete and accurate medication profile
- Lack of time in practice
- Lack of access to complete and updated patient information
- Need for communication systems to support deprescribing
- Need to optimize workflow and staffing to free up time to deprescribe
- Lack of adequate reimbursement

"... all medications need to be revisited... many medications are being forgotten about and in the environment that we're in right now, as family physicians with the lack of time and the fact that we're seeing patients all the time that we don't know because there's a grossly inadequate amount of family physicians out there." - **Family Physician**

"... it's challenging, and if we're putting that much professional expertise in a service, especially if it's going to have long term resonating benefits in the healthcare system, why are we not being reimbursed for this?" - **Pharmacist**

"things like alerts help, electronic alerts on people's file when they're on over a certain medication that you get a pop-up alert that says, maybe consider a medication review, if they're on more than five medications,... when there's changes in kidney function and liver function that impairs medication metabolism and age and multiple medications these kind of alerts pop up on the screen when you start an account with a patient...it forces you to say, oh hey, we can talk about that." - **Nurse Practitioner**

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Project 2: Literature Review

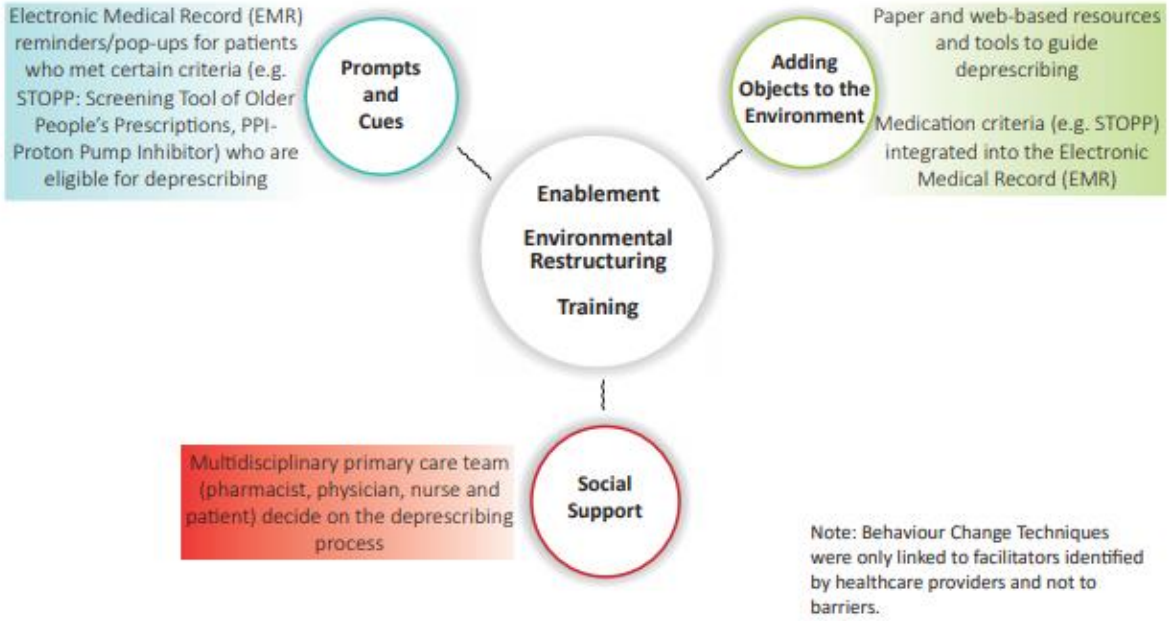
A review of the international literature from 2002 to 2018 was conducted and found 35 studies related to deprescribing in primary care that demonstrated positive outcomes. Deprescribing strategies used in the studies were categorized as Behaviour Change Techniques (BCTs) using the Behaviour Change Wheel (BCW)[2], a widely used framework for designing and evaluating behaviour change interventions.

Studies were completed in older adults or targeted specific drug classes (e.g. proton pump inhibitors or benzodiazepines) and many included a combination of BCTs. Although the studies all had positive outcomes, the study designs and outcomes varied greatly and the overall effectiveness of specific strategies could not be determined; however, categorization of the BCTs used in the studies may be helpful in designing deprescribing strategies for use in Nova Scotia.

Project 3: Linking of Qualitative Study and Literature Review

To assist in the development of deprescribing strategies that may be helpful in Nova Scotia, we linked BCTs identified in the literature review with the TDF domains from the interviews and focus groups with local clinicians. The BCTs and TDF domains were linked through the intervention functions of the BCW. The figure below summarizes the specific BCTs that were linked to clinician perspectives from the **Environmental Context and Resources** domain of the TDF.

What We Found in the Literature Regarding Behaviour Change Techniques for Deprescribing



Note: Behaviour Change Techniques were only linked to facilitators identified by healthcare providers and not to barriers.

The centre circle represents the intervention functions from the Behaviour Change Wheel.[2] The outer circles represent the Behaviour Change Techniques from the Behaviour Change Wheel. The coloured boxes represent the specific behaviour change techniques that were identified from the published literature.

References:[1]Cane J, O'Connor D, Michie S. Validation of the theoretical domains framework for use in behaviour change and implementation research. Implement Sci. 2012; 7: 37.
[2]Michie S. van Stralen M. West R. The behaviour change wheel: a new method for characterising and designing behaviour change interventions. Implement Sci. 2011; 6: 42.

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This 2 page summary focuses on **Memory, Attention and Decision Process** and the **Intentions** domains of the TDF.

What is Memory, Attention and Decision Process?

"The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives."

What are Intentions?

"A conscious decision to perform a behaviour or a resolve to act in a certain way."

What We Heard from Local Healthcare Providers

- The need for a systematic process for deprescribing
- Deprescribing is initiated by a trigger, then communication with a patient
- Deprescribing is a complex process

"...when I think about deprescribing ... I ... think about certain drug classes and, so I kind of look at those drug classes that maybe this patient is on and just start to ... ask them questions, whether it's blood pressure or something they're maybe using for insomnia"... "how is your blood pressure doing, how have you been sleeping, have you noticed this" and kind of prompt them for maybe side effects.. ... that maybe they wouldn't recognize as concerning or even recognize their side effects to their medications, and then from there based on their response... kind of assess if maybe there's room for tailoring or removing." - **Pharmacist**

"... it's been ad hoc here, so if you see something you try to arrange a conversation and there isn't any kind of routine identification, particularly when we have patients on multiple meds and there's no way that our system identifies that as a possible issue. And therefore it only becomes the secondary issue..."
- **Family Physician**

"So it really depends on the patient and the situation, and the medication. So for example, if I'm changing a medication for mood, and it's a healthy young person, then I, we have a face to face discussion, "Is this the right time to do this, is this a plan that you want to undertake, and are you okay with this", then usually having some established way to taper, depending on the medication, ... and you kind of need to develop a plan to do that in concert with the patient and they agree with the plan. And usually on the prescription ...it'll be written into the instructions for the pharmacist in terms of the tapering schedule to discontinue over what time frame."
- **Nurse Practitioner**

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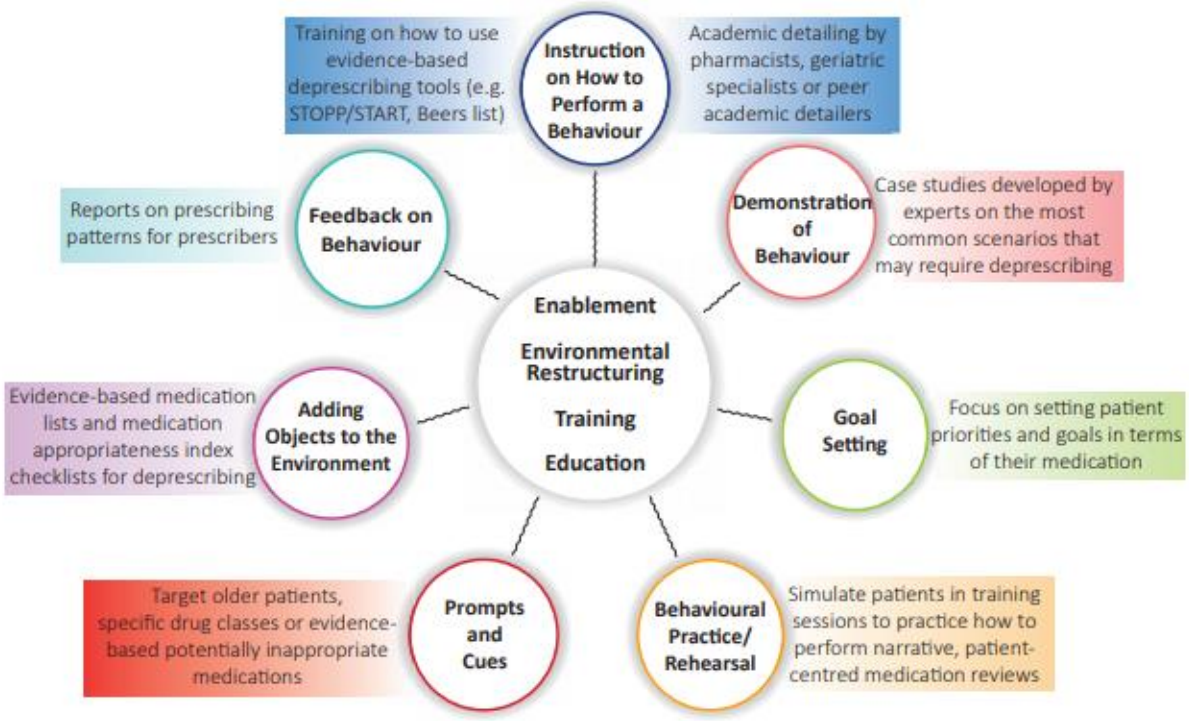
What We Found in the Literature Regarding Behaviour Change Techniques for Deprescribing



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Social Influences Handout

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This 2 page summary focuses on **Social Influences** domain of the TDF.

What are Social Influences?

"Interpersonal processes that can cause individuals to change their thoughts, feelings or behaviours."

What We Heard from Local Healthcare Providers

- Patient's interest in deprescribing can help drive the process
- Patients are hesitant to stop certain medications
- Collaboration with other healthcare providers can support deprescribing
- Challenges in working with other healthcare providers who do not have similar attitude towards deprescribing

*"the challenge is when the patient is not participating in the practice. When they are struggling with it or they don't understand and they say well "Dr. Doolittle put me on this pill, what are you a nurse practitioner taking me off it" ...as a nurse practitioner, you have to really make sure the patients feel that you are able to do this and that you have enough education and knowledge to do this." - **Nurse Practitioner***

*"... the number of providers being perhaps a bit of a problem ... but on the other hand, they are also very helpful as a second set of eyes, because in seeing my patients sometimes I'll get a reminder to say "Do you know if this patient's on x, y or z? And "Do you really think they need to be there on that now?" ... as much as it can be an issue, it's also very helpful. ... we have a pharmacist working with us so she does med reviews on patients and looks at patient med lists especially if we've asked." - **Family Physician***

*"...the elephant in the room here would probably be ... communication with other healthcare professionals. And not always but you're fearful of being met with resistance or you're fearful of the other healthcare professional thinking you're A. either trying to take over or B. you know more than them or C. you know what's best for the patient." - **Pharmacist***

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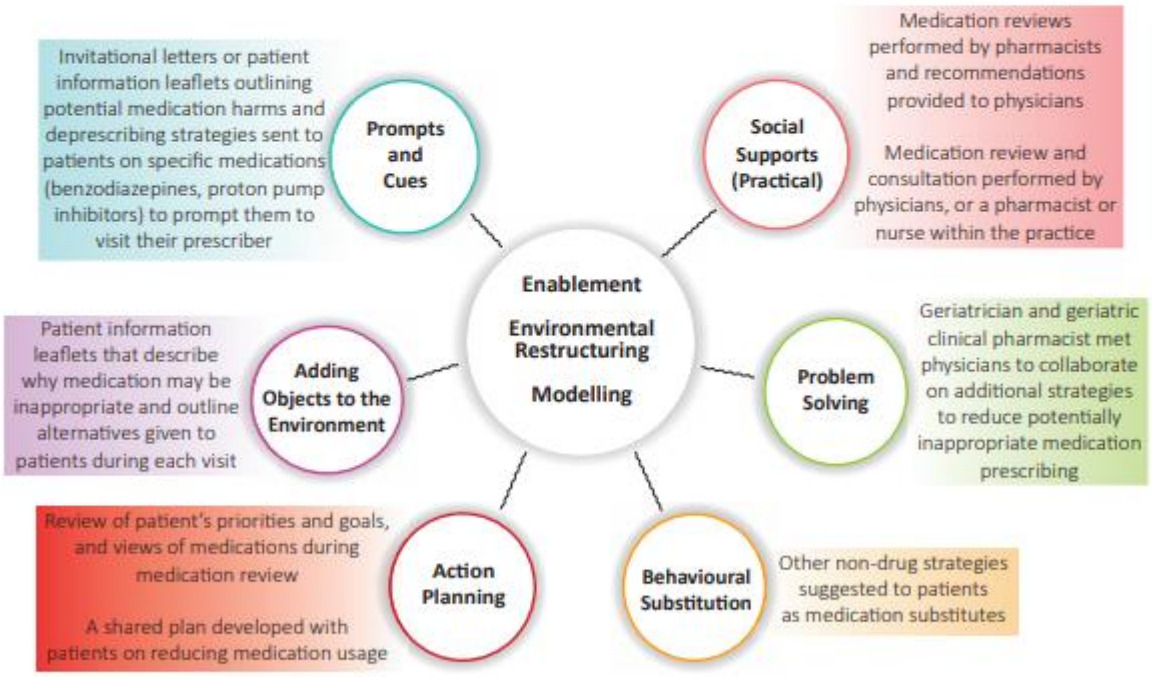
What We Found in the Literature Regarding Behaviour Change Techniques for Deprescribing



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Appendix C – Pre-Event Survey and Results

OPTx Knowledge Exchange Event Pre-Survey 1 Responses (N = 18)

Survey Introduction:

To prioritize the topics for discussion at the Knowledge Exchange Event, we need your help to determine the most important topics.

In the survey we will ask you to comment on the importance or helpfulness of the following:

- Statements that summarize the comments we heard from primary care clinicians (family physicians, community pharmacists and nurse practitioners) in Nova Scotia about what influences their deprescribing.
- Behaviour change techniques found in the international literature that may be used to address the comments heard from primary care clinicians

Survey Questions and Summarized Results:

1. Which stakeholder group do you most identify with? Check all that apply.

Stakeholder Group	Responses
• Citizen/Patient/Caregiver	5
• Healthcare provider/Clinician	10
• Healthcare services/Policymaker	3
• Professional association and/or Regulatory body	4
• Other	1

** Participants were allowed to select multiple responses therefore total does not match the number of completed responses.*

2. When thinking about Social Influences, which of the following influencers reported by clinicians do you think are Not important, Somewhat important, Very important to support deprescribing?

	Level of Importance		
	Not Important	Somewhat Important	Very Important
Patient's interest in deprescribing can help drive the process	0	0	18
Patients are hesitant to stop certain medications	0	4	14
Collaboration with other healthcare providers can support deprescribing	0	3	15
Challenges in working with other healthcare providers who do not have similar attitudes towards deprescribing	1	8	9

3. When thinking about Social Influences, which of the following behaviour change techniques that were used in the literature do you think would be Not helpful, Somewhat helpful or Very helpful to support deprescribing?

	Level of Helpfulness		
	Not Helpful	Somewhat Helpful	Very Helpful
Invitational letters or patient information leaflets outlining potential medication harms and deprescribing strategies sent to patients on specific medications (benzodiazepines, proton pump inhibitors) to prompt them to visit their prescriber	1	12	5
Patient information leaflets that describe why medication may be inappropriate and outline alternatives given to patients during each visit	1	9	8
Review of patient's priorities and goals, and views of medications during medication review	1	3	14
A shared plan developed with patients on reducing medication usage	1	1	16
Other non-drug strategies suggested to patients as medication substitutes	0	10	8
Geriatrician and geriatric clinical pharmacist met physicians to collaborate on additional strategies to reduce potentially inappropriate medication prescribing	0	8	9
Medication reviews performed by pharmacists and recommendations provided to physicians	0	5	13
Medication review and consultation performed by physicians, or a pharmacist or nurse within the practice	1	5	12

4. When thinking about Memory, Attention, Decision Process and Intentions, which of the following influencers reported by clinicians do you think are Not important, Somewhat important, Very important to support deprescribing?

	Level of Importance		
	Not Important	Somewhat Important	Very Important
The need for a systematic process for deprescribing	1	4	13
Deprescribing is initiated by a trigger, then communication with a patient	1	11	6
Deprescribing is a complex process	2	6	10

5. When thinking about, Memory, Attention, Decision Process and Intentions, which of the following behaviour change techniques that were used in the literature do you think would be Not helpful, Somewhat helpful or Very helpful to support deprescribing?

	Level of Helpfulness		
	Not Helpful	Not Helpful	Not Helpful
Training on how to use evidence-based deprescribing tools (e.g. STOPP/START, Beers list)	0	6	12
Academic detailing by pharmacists, geriatric specialists or peer academic detailers	0	8	10
Reports on prescribing patterns for prescribers	4	8	6
Evidence-based medication lists and medication appropriateness index checklists for deprescribing	0	15	13
Simulate patients in training sessions to practice how to perform narrative, patient-centred medication reviews	4	11	3
Focus on setting patient priorities and goals in terms of their medication	0	6	12
Case studies developed by experts on the most common scenarios that may require deprescribing	2	11	5
Targeting older patients, specific drug classes or evidence-based potentially inappropriate medications	0	6	12

6. When thinking about Environmental Context and Resources, which of the following influencers reported by clinicians do you think are Not important, Somewhat important, Very important to support deprescribing?

Facilitators	Level of Importance		
	Not Important	Somewhat Important	Very Important
Availability of deprescribing tools and resources	1	3	14
Alerts in electronic medical records to facilitate deprescribing	1	8	9
A team based approach to aid the deprescribing process	1	2	15

Barriers	Level of Importance		
	Not Important	Somewhat Important	Very Important
Lack of practice standards for deprescribing in primary care	1	6	11
Lack of documentation of a complete and accurate medication profile	1	4	13
Lack of time in practice	0	5	13
Lack of access to complete and updated patient information	1	2	15

Need for communication systems to support deprescribing	1	5	12
Need to optimize workflow and staffing to free up time to deprescribe	1	3	14
Lack of adequate reimbursement	4	5	8

7. When thinking about Environmental Context and Resources, which of the following behaviour change techniques that were used in the literature do you think would be Not helpful, Somewhat helpful or Very helpful to support deprescribing?

	Level of Helpfulness		
	Not Helpful	Not Helpful	Not Helpful
Paper and web-based resources and tools to guide deprescribing	0	8	10
Electronic Medical Record (EMR) reminders/pop-ups for patients who met certain criteria (e.g. STOPP: Screening Tool of Older People's Prescriptions, PPI - Proton Pump Inhibitor) who are eligible for deprescribing	1	5	12
Medication criteria (e.g. STOPP) integrated into the Electronic Medical Record (EMR)	0	7	11
Multi disciplinary primary care team (pharmacist, physician, nurse and patient) decide on the deprescribing process	0	5	13

8. Are there any other influencers on deprescribing in primary care in Nova Scotia that you think are important to consider?

Summary of responses:

Participants listed a number of other potential factors that may influence deprescribing. These included patient, family and caregiver involvement in care, side effects to some medications – including withdrawal, and education and resources available for deprescribing (e.g. CaDeN & Medstopper.com).

OPTx Knowledge Exchange Event Pre-Survey 2 Responses (n=17)

Survey Introduction:

Thanks to all who had a chance to participate in the first pre-Knowledge Exchange Event survey.
Based on responses we have been able to identify the behaviour change techniques felt to be most helpful to support deprescribing. In order to further prioritize topics for discussion at the Knowledge Exchange Event we would like you to complete this second and final survey (even if you were unable to complete the first survey) which should take 5-7 minutes to complete.

We would like you now to:

1. Rank the behaviour change techniques that you think will be helpful to support deprescribing; and
2. Provide input on how to address barriers to clinicians deprescribing.

Survey Questions and Summarized Results:

1. Which stakeholder group do you most identify with? Check all that apply.

Stakeholder Group	Responses
● Citizen/Patient/Caregiver	8
● Healthcare provider/Clinician	9
● Healthcare services/Policymaker	4
● Professional association and/or Regulatory body	4
● Other	0

* *Participants were allowed to select multiple responses therefore total does not match the number of completed responses.*

2. In the previous survey, behaviour change techniques (BCTs) that were used in the literature were rated according to how helpful Knowledge Exchange Day participants felt they were likely to support deprescribing.

Please rank your top 14 (with 1= Most Helpful to 14= Least Helpful) from the following list of BCTs that were rated from the first pre-Knowledge Exchange Event survey to be the most helpful for supporting deprescribing (now listed in alphabetical order below). Please only use each number once.

1	Focus on setting patient priorities and goals in terms of their medication
2	Multi -disciplinary primary care team (pharmacist, physician, nurse and patient) decide on the deprescribing process
3	Review of patient's priorities and goals, and views of medications during medication review
4	Medication reviews performed by pharmacists and recommendations provided to physicians
5	A shared plan developed with patients on reducing medication usage
6	Targeting older patients, specific drug classes or evidence-based potentially inappropriate medications

7	Medication review and consultation performed by physicians, or a pharmacist or nurse within the practice
8	Academic detailing by pharmacists, geriatric specialists or peer academic detailers
9	Evidence-based medication lists and medication appropriateness index checklists for deprescribing
10	Medication criteria (e.g. STOPP) integrated into the Electronic Medical Record (EMR)
11	Paper and web-based resources and tools to guide deprescribing
12	Geriatrician and geriatric clinical pharmacist met physicians to collaborate on additional strategies to reduce potentially inappropriate medication prescribing
13	Training on how to use evidence-based deprescribing tools (e.g. STOPP/START, Beers list)
14	Electronic Medical Record (EMR) reminders/pop-ups for patients who met certain criteria (e.g. STOPP: Screening Tool of Older People's Prescriptions, PPI - Proton Pump Inhibitor) who are eligible for deprescribing

3. In the Environmental Context and Resources domain of the qualitative study findings, there were seven barriers to deprescribing that were expressed by clinicians that were not linked to any behaviour change techniques in the literature.

Please rank from 1–7 (with 1= Most Important to 7= Least Important) the following barriers to clinicians being able to deprescribe. Please only use each number once.

1	Lack of access to complete and updated patient information
1	Lack of time in practice
3	Lack of documentation of a complete and accurate medication profile
4	Need to optimize workflow and staffing to free up time to deprescribe
5	Need for communication systems to support deprescribing
6	Lack of practice standards for deprescribing in primary care
7	Lack of adequate reimbursement

4. For your top three (3) barriers identified in Question 3 please indicate what you think might be helpful to address these barriers.

Summary of responses:

The top three barriers participants identified were Reimbursement, Time and Roles. Participants believe there is an economic benefit to deprescribing and they are understanding that this comes down to the time and effort of practitioners and recognize the need to be compensated for their time. This also flows into the next barrier identified of time. Participants understand that the deprescribing process takes a lot of time on the part of the patient and health care practitioners which can present as a barrier. Participants believe practitioners are overworked and have limited time for deprescribing. Some patients are also without a family physician so there is another barrier to accessing physician time. The final barrier identified by participants was the roles healthcare providers play in deprescribing. Participants believe that appropriate documentation for patients and prescribers about prescribed medication and its use would be helpful in ensuring proper prescribing. Such examples of access includes creating a centralized service to share information between all users. This would allow for better access but also allow for everyone to work in collaboration to reduce unnecessary medications. Roles also need to be defined in deprescribing including pharmacists. By having guidelines, or a framework in place for deprescribing this will allow for better care offerings to patients. An example mentioned was collaborative care teams as an opportunity to address several barriers including time, reimbursement, and roles.

5. Are there any other influencers on deprescribing in primary care in Nova Scotia that you think are important to consider?

Summary of responses:

Participants listed a number of other items that influenced deprescribing. These included changing the mindset and behaviours of patients to move away from a mindset that medications are needed and accessible since we have access to healthcare living in Canada. Another area of influence is roles. Participants see roles for patients, caregivers, family members and community pharmacists and believe health professionals should be compensated appropriately based on their deprescribing work. Participants also highlighted the need for resources to aid in deprescribing. An example of a valued resource mentioned is pharmacist and physician time.

Deprescribing in Primary Care in Nova Scotia Knowledge Exchange Event

Thursday, June 20, 2019

Room C264, Collaborative Health Education Building (CHEB), 5793 University Avenue, Dalhousie University

Agenda*

7:45am to 8:00am	Coffee/Tea and Refreshments
8:00am to 8:30am	Welcome, Introductions, Background
8:35am to 9:20am	World Café Rounds 1 and 2
9:25am to 9:40am	Refreshment Break
9:45am to 11:15am	World Café Rounds 3, 4 and 5
11:15am to 12:00pm	Lunch
12:00pm to 12:30pm	Summary of World Café
12:30pm to 12:55pm	Prioritizing Topics and Next Steps

*Please note, times are approximate.

Appendix E – Table Discussion Questions

Collaboration Table

1. How are we or how can we increase collaborative opportunities with patients, caregivers and healthcare providers (physicians, nurses, pharmacists) to support deprescribing?
2. What do you think could work? What would it look like?
3. What supports need to be considered to help support collaboration?
4. Although these were the BCTs found in the literature, is there something else related to this topic that you can think of that may work?

Education and Training Table

1. How are we or could we facilitate uptake of use of deprescribing resources (clinician and patient focused)?
2. Although these were the BCTs found in the literature, is there something else related to this topic that you can think of that may work?

Health Technologies Table

1. How are we or could we mobilize electronic resources (e.g. electronic medical records, pharmacy databases, patient portals "My Health") to support deprescribing? Today and in the future.
2. Although these were the BCTs found in the literature, is there something else related to this topic that you can think of that may work?

Identifying Patients Table

1. How are we or should we be identifying patients for deprescribing - patient characteristics, medications?
2. How is this or could this work in practice?
3. Although these were the BCTs found in the literature, is there something else related to this topic that you can think of that may work?

Patient Goal Setting Table

1. How are or should we be engaging patients/clinicians in setting goals/priorities about deprescribing?
2. How could we build on those activities?
3. How could it work in practice and within the system?
4. Although these were the BCTs found in the literature, is there something else related to this topic that you can think of that may work?

Appendix F – OPTx Knowledge Exchange Event Evaluation Survey and Results

OPTx Knowledge Exchange Event Evaluation Survey and Results (n=20)

1. Which stakeholder group do you most identify with? (Select all that apply).

Stakeholder Group	Responses
● Citizen/Patient/Caregiver	5
● Healthcare provider/Clinician	12
● Healthcare services/Policymaker	2
● Professional association and/or Regulatory body	2
● Other	0

* *Participants were allowed to select multiple responses therefore total does not match the number of completed responses.*

2. Satisfaction with the Deprescribing Event

Overall the majority of respondents reported being "Very Satisfied" with the Pre-Communication, Group Facilitation and the Introductory Presentation (90%). Every respondent felt "Very Satisfied" with the Ability to be Involved in the Discussion (100%). The Ranking of Priorities was also positive with most responses either Mostly Satisfied (35%) or Very Satisfied" (65%). The Location of the event also received positive responses with Mostly Satisfied (20%) and Very Satisfied" (80%).

3. If you stated you were dissatisfied with any of the above or any aspect of the Deprescribing event, how do you think we could improve future events? Please suggest two areas of improvement.

There were only two responses for this question. One response recommended more time for discussion and the other suggested a better location.

4a. Did the Deprescribing event meet your expectations?

Yes	20
No	0

4b. Why/Why not?

Summary of responses:

- Participants were happy with the event and commented on how it exceeded their expectations. They also commented about the flow of information and how it was well presented and believed we had great participant diversity.

5. Please comment on the strengths of the Deprescribing event.

Summary of responses:

Participants commented on the collaboration between multiple stakeholders as well as how well organized and executed the event was.

Appendix G – Specific Discussion Examples Linked to Key Priorities

Discussion topics from World Cafe linked to key priorities identified from the Knowledge Exchange Event. Specific examples of deprescribing strategies discussed during table discussions at the Knowledge Exchange Event were mapped to Behaviour Change Wheel (BCW) intervention functions, then associated behaviour change techniques (BCTs). Similar deprescribing strategies were then grouped and synthesized. The synthesized examples were then categorized under the summarized key priorities.

Key Priority	**Specific Examples of Deprescribing Strategies from Stakeholder Discussions**
Communication	
1. Public awareness campaign about deprescribing	Patients may not understand phrases like "deprescribing" or "medication review". Need to make it simpler and comprehensible Convey to patients that deprescribing is not "taking something away". It is to "give" patients a benefit. Work with patient advocacy groups and provide them with the most up-to-date evidence Put up advertisements about deprescribing on professional organizations' websites. Send out ads to patients from the Department of Health and Wellness Stress the importance of language. Deprescribing is not a “failed treatment”
2. Patients, families and caregivers lead conversations and ask questions about their medications	Provide a list of questions in the waiting area for patients to ask, so patients can initiate deprescribing process by asking their prescriber about their medications Provide a form for patients to fill out concerns and issues before appointment Have patient bring a navigator that allows them to ask questions during visits
3. Discussion of goals and duration of drug therapy, and deprescribing as part of routine care	Discussing duration of therapy or deprescribing at the time of starting a new prescription Have a conversation about deprescribing at the time of prescription, regarding the process of stopping a medication, reducing the dose, using it as needed, etc. Emphasize on side effects of medications when counselling Utilize medication calendars and simplified lists to promote patient's understanding of medications

	Asking patients about their medication goals "*are you interested in setting goals? What are your medications and what are your concerns"* Understand patient goals for therapy during consultation Use motivational interviewing and set reasonable goals with patients. E.g. the use of pain medications is to improve functioning and reduce pain as opposed to completely eliminate pain
Compensation	
4. Appropriate payment model for all pertinent healthcare providers (e.g. physicians, nurse practitioners, pharmacists) to facilitate deprescribing	Incentives for deprescribing. E.g. deprescribing fee codes for prescribers, also incentives for pharmacists
Education	
5. An education program with a consistent message around deprescribing accessible to the public, all healthcare providers and healthcare provider students	Design a designated deprescribing academic detailing program Academic detailing with interprofessional detailers Workshops, academic detailing, and other education opportunities need to travel to remote communities to increase access Monthly public forums on deprescribing that invites patients to attend Set up deprescribing workshop delivered by students or healthcare providers in clinics that open to patients Clinician training on how to use tools (e.g. EMPOWER) Adding deprescribing into student curriculum Prescriber training on deprescribing including credential education + post grad certifications + specialty practice
Prompts	
6. Electronic health systems provide prompts to initiate deprescribing	Integrate deprescribing alerts based on indication, dose, drug-drug interactions, drug-disease interactions, and duration of prescription into the EMR Adding an alert to pharmacy system for deprescribing if a patient has been taking a prescription for a certain duration Selective alerts on medications that can potentially be deprescribed (e.g. do not send alerts if PPI is used for Barrett's esophagus) Insert EMR pop-ups that require mandatory action that cannot be ignored

7. Healthcare providers, patients, families and caregivers routinely identify opportunities for deprescribing	Put up a sign of "please ask about your medications" in the pharmacy, or have handouts in the clinics to encourage patients to ask about their medications Send annual notifications on patients' birthday through MyHealth to prompt them for a discussion of their medications and lab results if they haven't already done so. This can be associated with their MSI card, so patients without a family physician can benefit from it Adding a "potential for deprescribing in the future" alert on the patient handout Deliver patient handouts during renewals of certain drug classes to facilitate deprescribing Develop a pharmacy care plan which reminds pharmacists opportunity for deprescribing after a certain period of time Identify routine opportunities for medication reviews in practice, such as after every hospital discharge, Annual medication review for targeted populations, Conduct required medication review when people apply for Pharmacare, and Well Seniors Visits as an opportunity for medication reviews and deprescribing Schedule dedicated deprescribing visit outside of routine consultation to increase quality and opportunity for deprescribing Shorter duration of medications used to force a follow-up conversation and more careful management Putting a "deprescribe in 8 weeks" pharmacy label on PPI pill bottles Enforce a 5-day maximum duration for acute medications
Resources	
8. Functional capabilities of health information technology optimized to support process of deprescribing	Integrate deprescribing tools into EMR Generate prescription reports and target patients on large volume of medications (e.g. more than 5/10/15 medications) and certain drug classes like benzodiazepines and combination of certain drug classes, patients on Pharmacare who are on certain drug classes, and target a certain age (e.g. around menopause) Generate reports weekly, monthly around specific drug use A common health record with complete patient information Using "MyHealth" to print out patient's medication list during visit to help them understand their medications Development of a patient-oriented app for their medications Pharmacist access to collateral patient information (e.g. SHARE)

9. A repository of existing deprescribing resources accessible to healthcare providers, patients, families and caregivers	Set up a central deposit or website for reliable information on deprescribing for clinicians and patients Have professional organizations send out deprescribing tools
Roles	
10. Healthcare providers, patients, families and caregivers have a shared understanding and respect of each other's roles in deprescribing	Collaborative experiential learning - e.g. doctors spend time in pharmacies. Pharmacists spend time in practice clinics Implement clinical rotations with other professions in student education
11. Healthcare providers, patients, families and caregivers work collaboratively to facilitate deprescribing	Scheduled team meeting between prescribers and supporting healthcare providers on deprescribing Utilize the health home model to increase opportunities for deprescribing Start identifying patients eligible for deprescribing at the pharmacy, with an agreement that the concerns from pharmacists will be taken seriously by the prescribers Add a new team member to specifically do medication reviews Integrate geriatric medicine practitioners in an e-consult program Group medical visits with patients, families, and healthcare teams
12. The expertise of all healthcare providers, patients, families and caregivers is leveraged to optimize deprescribing	Allow pharmacists to utilize deprescribing tools (e.g. EMPOWER) before and after seeing a prescriber Engage pharmacists in deprescribing, especially for medication review and patient education Create simplified (1 to 2-page) medication review reports from pharmacists to prescribers Refer patient to nutritionist when deprescribing a stomach medication

Appendix H – References

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