

#### Context

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- Community pharmacists' have recently taken on greater roles in chronic disease management for patients with a wide range of chronic conditions.
- As one of the more accessible health professionals for individuals, it is increasingly important to understand the expanded role of community pharmacists, and how to best engage them to improve health outcomes, care

# **Rapid Synthesis**

The effects of community pharmacists' leadership or engagement in chronic disease management on the quintuple-aim outcomes

# 29 November 2023

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experiences, provider satisfaction, and economic and equity outcomes.

• This rapid synthesis explores the effects of pharmacists' leadership or engagement in chronic disease management on the quintuple-aim outcomes.

#### Question

• What are the effects of pharmacists' leadership or engagement in chronic disease management on the quintupleaim outcomes?

### High-level summary of key findings

- We found 25 evidence syntheses and 14 primary studies, including a recently published overview of systematic reviews on community pharmacist-led interventions for chronic disease management.
- Most of the included evidence focused on pharmacist-led approaches (i.e., patient education, chronic disease selfmanagement support, prescribing, medication management and review, or a combination of two or more of these types of interventions).
- Some of the evidence syntheses and primary studies described collaboration with other providers and multi/interdisciplinary care planning to improve health outcomes, but well-designed studies are needed to clarify the potential impact of pharmacist involvement in care planning.
- The evidence syntheses and primary studies found that pharmacist-led approaches improved clinical outcomes and economic outcomes for a wide range of chronic conditions, particularly for hypertension, diabetes, and cardiovascular diseases.
- There was limited available information on healthcare utilization outcomes and equity across all chronic conditions.
- Primary studies indicated that pharmacists were willing to participate in chronic disease management as long as they had adequate training (including cultural competency training), access to educational materials and appropriate compensation and staffing.

## Framework to organize what we looked for

- For what chronic conditions
  - o Alzheimer's disease and other dementia
  - o Cancer
  - o Cardiovascular disease

- Heart failure
- Ischemic heart disease
- o Chronic kidney disease
- Chronic pain
- 0 Diabetes
- o Dyslipidemia
- Hypertension
- o Lung disease
  - Asthma
  - Chronic obstructive pulmonary disease (COPD)
- Mood and anxiety disorders
- 0 Osteoarthritis
- o Osteoporosis
- Substance-use disorders
- In what community settings
- 0 Pharmacies
- Other community-based settings (e.g., primary care clinics)
- Using what interventions/approaches o Pharmacist-led
  - interventions/approaches
  - Patient education
  - Chronic disease self-management support (including supporting lifestyle changes)
  - Immunizations
  - Prescribing medications, deprescribing, tapering, adaptations
  - Medication management and review (including reconciliation)
  - Collaboration with other providers (e.g., care conferencing)
  - Multi/interdisciplinary care planning With what supports is chronic disease
- management provided
  - Care plans
  - o Decision-support tools
  - Electronic medical records (EMRs)/electronic health records (EHRs)

#### Box 1: Approach and supporting materials

We identified evidence addressing the question by searching Health Systems Evidence and PubMed to identify evidence syntheses and primary studies from 2018 to present. We conducted an updated search (2017–2023) since the publication of the 2020 <u>overview of systematic review on community</u> <u>pharmacist-led interventions in chronic disease management</u> (search years 2007–2017). All searches were conducted on 29 September 2023. The full search strategies used are included in Appendix 1.

In contrast to our rapid evidence profiles, which provides an overview and insights from relevant documents, this rapid synthesis provides an in-depth understanding of the evidence.

We appraised the methodological quality of evidence syntheses that were deemed to be highly relevant using AMSTAR. Note that quality appraisal scores for evidence syntheses such as rapid syntheses/reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes. AMSTAR rates overall quality on a scale of 0 to 11, where 11/11 represents an evidence synthesis of the highest quality. 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 evidence syntheses pertaining to delivery, financial or governance arrangements within health systems or to broader social systems.

This rapid synthesis was prepared in a 30-business day timeline.

A separate appendix document includes:

- 1) methodological details (Appendix 1)
- 2) a framework to organize what we looked for (Appendix 2)
- 3) a summary table of evidence organized by approaches/interventions (Appendix 3)
- 4) findings from each evidence synthesis (Appendix 4)
- 5) findings from each primary study (Appendix 5)
- 6) documents excluded at the final stages of reviewing (Appendix 6)
- o Other information and communication technologies (ICT) that support individuals who provide care
- o ICT that support individuals who receive care
- Outcomes
  - Advancing equity
  - o Improving health outcomes
  - o Improving care experiences
    - Access (e.g., attachment rates, continuity of care)
  - Improving provider satisfaction
    - Administrative burden

- Quality assurance (e.g., feedback mechanisms for individuals)
- o Keeping per-capita costs manageable
  - Administrative and operational costs

### What we found

We identified 39 evidence documents relevant to the question.(1-39) The evidence documents include:

- 25 evidence syntheses
- 14 primary studies.

We outline in narrative form below our key findings related to the question from evidence documents deemed to be of high relevance to the question (see Box 1 for more details).

A more detailed summary of the evidence organized by chronic condition, types of approaches and/or interventions and reported outcomes is provided in Appendix 3. In addition, detailed data extractions from each of the included evidence documents is provided in Appendices 4 and 5, and hyperlinks for documents excluded at the final stage of reviewing are provided in Appendix 6.

## Key findings from highly relevant evidence sources

#### Pharmacist-led approaches

Most of the identified evidence documents described pharmacist-led approaches (i.e., patient education, chronic disease self-management support, immunizations, prescribing, medication management and review, or a combination of two or more of these interventions). Patient education often included the use of peer-reviewed manuals, resources, face-to-face interactions, goal setting, and patient follow-up and monitoring.(1) Chronic disease self-management support typically involved addressing patient concerns, identifying and prioritizing health goals, and educating patients.(2) Prescribing medications focused on the pharmacist's authorization to prescribe autonomously for conditions within their scope.(6) Medication management and review was sometimes referred to as medication therapy management. This approach could involve a patient-centred technical review of prescriptions, improvement of patient adherence to drug therapy, self-management education, and/or clinical review of all medications.(7) Most of the identified evidence documents were based in a community pharmacy (e.g., independently owned pharmacy or chain pharmacies), while some were in other community-based settings such as healthcare centres and primary-care clinics and practices. Similar to the findings of a Cochrane evidence documents described that pharmacist-led approaches were integrated into the existing workflow of the setting.(10; 18; 31).

In a recently published medium-quality evidence synthesis (an overview of systematic reviews) on the impact of community pharmacist-led approaches in chronic disease management largely consisted of a combination of patient education, medication review and recommendations of medication modifications. The authors reported improved clinical outcomes across a wide range of chronic diseases such as diabetes, hyperlipidemia, HIV/AIDS, and cardiovascular and respiratory diseases.(28) The reported outcomes included reductions in A1C as part of diabetes management, and total cholesterol and low-density lipoproteins as part of management of cardiovascular disease. In addition, improved medication adherence and lung function were reported as improved with pharmacist-led approaches. However, the review only included studies based in the United States and there was limited information about economic and healthcare utilization outcomes.(28)

We found similar findings among evidence documents since the publication of the overview of systematic reviews. Pharmacist-led approaches were often described as being multifaceted and with varying combinations of approaches. Overall, these approaches improved clinical and economic outcomes across different chronic conditions. Two medium-quality evidence syntheses and three primary studies indicated that pharmacist-led approaches (including patient counselling and education and medication management) are cost-effective for the management of diabetes, hypertension, and cardiovascular disease.(3; 16; 21; 32; 34) Specifically, a medium-quality evidence synthesis highlighted that medication reviews, adherence strategies and medication management were the most cost-effective interventions for extending pharmacist services for diabetes and hypertension management.(32)

In addition, there was limited but emerging evidence on clinical, healthcare utilization and economic outcomes related to asthma, (1; 19; 28) chronic obstructive pulmonary disease, (15; 29) osteoporosis and osteoarthritis, (26) chronic pain, (23; 39) chronic kidney disease (12) and mood and anxiety disorders. (27) For example, a recent primary study conducted in Alberta reported that the use of pharmacist-led comprehensive care plans for patients with chronic obstructive pulmonary disease did not result in significant reductions in healthcare utilization. The authors noted that observed changes in healthcare utilization and economic outcomes may have been difficult to detect as pharmacy services is one component of a larger continuum of care for patients with chronic obstructive pulmonary disease.(2) In addition, one primary study found high levels of patient satisfaction with the care that they received in a pharmacist-led chronic care management clinic. (30) In terms of provider experiences, we found primary studies that indicated that pharmacists were willing to participate in chronic disease management as long as they had adequate training in motivational interviewing, access to educational materials and appropriate compensation and staffing.(4; 5; 9) Additionally, one primary study reported that the community pharmacy comprehensive medication review completion rate was influenced by the pharmacists' scope of practice, setting (e.g., retail chain or independent pharmacy) and patient behaviours.(11) Another primary study found that pharmacists, other health professionals, and patients perceived effective community pharmacist-led interventions as those that were patient-centred, ensured appropriate capacity and skills of pharmacists, and were integrated into existing health and lay-support networks.(31) Finally, we identified limited evidence that focused on advancing equity. One primary study reported that pharmacists were able to adapt and serve culturally and linguistically diverse people, but they would prefer cultural competency training and linguist support as part of these efforts.(19)

#### Collaboration with other providers

We identified five primary studies that described pharmacist collaboration with other health providers.(33-37) Collaboration with other providers was often described as consultations between pharmacists and physicians, referrals to appropriate health providers, patient information sharing among relevant health professionals, and provision of pharmacist-led medication management, point-of-care testing or screening, education, counselling and lifestyle advice to patients. The studies primarily focused on chronic obstructive pulmonary disease (COPD), diabetes, hypertension, heart failure, dyslipidemia, HIV/AIDS or multiple chronic conditions. Some of the reported outcomes included improved management of chronic conditions, quality of life, increased life-years and reduced hospitalization. One primary study reported that pharmacists engaged with other providers could potentially help support patients with chronic non-alcoholic fatty liver disease by ensuring comprehensive disease management.(33) Lastly, a primary study identified that a lack of resources, pharmacists being overworked and insufficient information sharing between pharmacists and other providers as barriers that may impact effective chronic disease management by pharmacists.(37)

#### Multi/interdisciplinary care planning

We identified two evidence syntheses (one low-quality and another medium-quality) that referenced multi/interdisciplinary care planning.(38; 39) Similar to collaborating with other providers, the literature described this approach as pharmacists' involvement in multi/interdisciplinary teams by providing health education on medication adherence, medication review and management, and patient lifestyle monitoring. One low-quality evidence synthesis referenced that community pharmacists could be involved in larger multidisciplinary teams, while the medium-quality evidence synthesis indicated the need for well-designed studies to clarify the potential impact, especially for patients with complex chronic conditions.

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