Optimizing Chronic Disease Management in the Community (Outpatient) Setting: an evidence synthesis

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ECFAA, HQO Mandate and OHTAC Guidance

- *Excellent Care for All Act* (ECFAA), focuses on improving the quality and value of the patient experience through the application of evidence-based health care. The central principles of ECFAA are: patient centredness, continuous quality improvement, efficient use of resources and that care should be based on the very best evidence and standards of care.
- Under the mandate as established by ECFAA, HQO is exploring ways to reduce inappropriate hospitalizations and improve chronic disease management for select chronic conditions.
- Timely and effective outpatient management of chronic conditions can prevent the onset of complications, reduce the risk of acute episodes, prevent hospitalizations, improve clinical and health status and reduce associated mortality.
- OHTAC advises that the hospitalization rate for chronic diseases is a surrogate measure of quality of outpatient or community-based health care for people with chronic conditions.

This is the first attempt by any jurisdiction to develop a broad based evidentiary platform on which to inform public policy regarding a comprehensive approach to community based healthcare services

The Question

What evidence-based services are effective and cost-effective to optimize chronic disease* management (CDM) in the community (outpatient) setting?

Outcome measures:

- Hospital utilization (admissions, readmissions, lengths of stay (LOS), emergency department utilization, admissions to long-term care facilities)
- Survival / mortality
- Health-related quality of life / functional status
- Disease-specific clinical measures
- Patient satisfaction

*Limited to the following conditions: COPD, CAD, CHF, atrial fibrillation, diabetes, stroke, chronic wounds and also including multiple chronic conditions/multi-morbidity

Methods

Scoping and initial steps

- Complete an initial scoping of the literature. Identify drivers and potential interventions for review.

- Strike Expert Advisory Panel to assist in selection of appropriate drivers / interventions and to contextualize the evidence for Ontario. Panel includes:
  - Policy makers
  - Researchers
  - Care providers

Expert Panel Members	Affiliation
Chair: Shirlee Sharkey	Saint Elizabeth
Theresa Agnew	Primary care nurse practitioner, East End Community Health Centre
Onil Bhattacharyya	St. Michael`s Hospital; University of Toronto; ICES
Arlene Bierman	St. Michael`s Hospital; University of Toronto; ICES
Susan Bronskill	University of Toronto; ICES
Catherine Demers	Faculty of Health Sciences, McMaster University
Alba Dicenso	School of Nursing, McMaster University
Nick Kates	Health Quality Ontario – QI; McMaster University; Hamilton Family Health Team
Wendy Levinson	University of Toronto ; University Health Network
Raymond Pong	Centre for Rural and Northern Health Research and Northern Ontario School of Medicine, Laurentian University
Fredrika Scarth	Ministry of Health and Long-Term Care
Michael Schull	Sunnybrook Health Sciences Centre; University of Toronto; ICES
Moira Stewart	Centre for Studies in Family Medicine, University of Western Ontario
Walter Wodchis	University of Toronto; HSPRN; THETA

Mega analysis

- Conduct individual evidence-based analyses.
- Partner with PATH and THETA to conduct economic analysis including costing of interventions with significant benefit and economic modeling of significant effects by disease-specific cohorts where possible.
- Partner with CHEPA to conduct qualitative analyses on patient centredness and vulnerability as these concepts relate to chronic diseases and interventions under review.
- For the final report, re-aggregate interventions and include input from the expert panel and findings from the economic and qualitative analyses.

Inclusion and Exclusion Criteria

Search Criteria

- Limit to identified chronic conditions
  - COPD
  - CAD
  - CHF
  - Atrial fibrillation
  - Diabetes
  - Stroke
  - Chronic wounds
- Also include (general terms)
  - Chronic conditions
  - Multiple chronic conditions/multi-morbidity
- English language
- Exclude grey literature
- Limit to adults

Additional limits

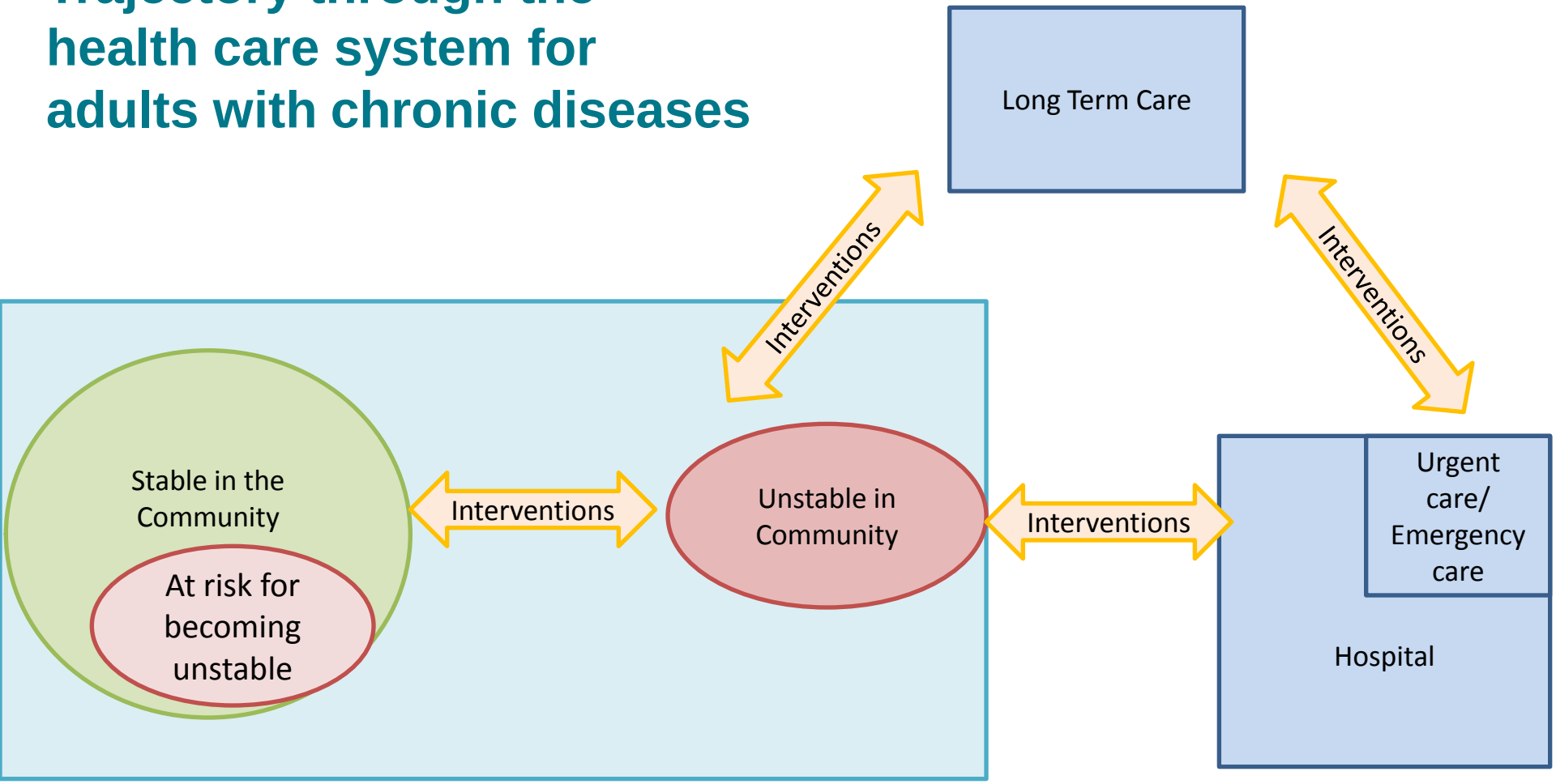
- Some additional criteria may be specified for each intervention
  - Publication dates
  - Systematic reviews, RCTs, HTAs
  - Condition(s) if appropriate

Outcomes

- Mortality / survival
- Acute hospital admissions (re-admissions)
- Long-term care admissions
- ER visits
- Length of stay
- HRQOL
- Functional status
- Disease specific clinical measures
- Patient satisfaction

Results

Trajectory through the health care system for adults with chronic diseases



INTERVENTIONS UNDER REVIEW

Interventions under review

Health technologies: review of previous MAS EBAs (past five years) to identify technologies that are consistent with overall mega analysis objectives

Transitional care: Are transitional care bundles (e.g., support services, follow-up activities and other interventions that span pre-hospital discharge to the home setting) effective at reducing health resource utilization and improving patient outcomes compared to standard care alone?

Continuity of care: Does continuity of care with a physician or a health care team improve patient outcomes, satisfaction and reduce health service utilization?

Lifestyle modification/self management: What is the effectiveness and cost-effectiveness of self-management support interventions compared to usual care for persons with chronic conditions?

Advanced access: Does access to same-day appointments with a physician (primary care or specialist) improve patient outcomes, satisfaction and reduce health service utilization?

In-home care: What is the effectiveness and cost-effectiveness of care delivered in the home (e.g. in-home care) compared to no home care, usual care or care received outside of the home (e.g. in a health care setting)?

Screening for depression/anxiety: What is the impact of screening for depression and/or anxiety among adults with chronic diseases on their (chronic) disease-specific outcomes and health service utilization?

Electronic tools for health information exchange: What is the impact of electronic tools on patient outcomes when utilized to improve information continuity and care coordination of adults with chronic diseases?

Specialized nursing care: What is the evidence (and role) for specialized nursing practice in comparison to usual care in improving patient outcomes and health system efficiencies for chronic disease management in the primary care setting?

Other MAS work that contributes

- Specialized Community Based Care / Intermediate care
  - COPD
  - Heart failure
  - Diabetes
  - Chronic wounds
- Aging in the Community
- Stroke review
- COPD mega analysis
- Behavioural interventions for type 2 diabetes

EBA	Cohorts where data were available								
	Diabetes	CAD	Atrial fibrillation	Stroke	Heart failure	COPD	Chronic wounds	General CD	Multi-morbid
Previous EBAs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Advanced access	Yes	Yes	No	No	No	No	No	Yes	Yes
Continuity of care	Yes	Yes	No	No	No	Yes	No	Yes	Yes
Specialized community based care	Yes	No	No	No	Yes	Yes	Yes	No	No
Transitional care	No	No	No	No	Yes	No	No	Yes	Yes
In-home care	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes
Self management (Stanford model)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes
Screen and treat for depression	Yes	Yes	No	No	Yes	No	No	No	No
Electronic tools	Yes	Yes	No	No	Yes	No	No	Yes	Yes
Specialized nursing care	Yes	Yes	No	No	Yes	No	No	Yes	No

EBA	Outcomes for which data were available									
	Admits	Readmits	LOS	ED visits	LTC admission	Mortality	Disease specific measures	HRQOL	Functional status	Patient satisf'n
Previous EBAs	Yes	No	Yes	No	No	Yes	Yes	Yes	No	No
Advanced access	Yes	No	Yes	Yes	No	No	Yes	No	No	Yes
Continuity of care	Yes	No	No	Yes	No	Yes	Yes	No	No	Yes
Specialized community based care	Yes	No	Yes	Yes	No	Yes	Yes	Yes	No	No
Transitional care	No	Yes	Yes	No	No	Yes	No	Yes	No	Yes
In-home care	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Self management (Stanford model)	Yes	No	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Screen and treat for depression	No	No	No	No	No	Yes	Yes	NA	No	No
Electronic tools	Yes	Yes	Yes	Yes	No	No	Yes	No	No	No
Specialized nursing care	Yes	No	Yes	Yes	No	No	Yes	Yes	No	Yes

SUMMARY OF CLINICAL FINDINGS

Summary of Clinical Results

- Strategies that were found to be clinically effective (and should be considered for implementation/ expansion in Ontario)
  - Specialized nursing care
  - Continuity of care
  - In home care
  - Transitional care (individualized pre-discharge planning)
  - Health technologies (review of previous MAS EBAs)
  - Specialized Community Based Care
  - Aging in the Community recommendations from OHTAC**

**Exercise interventions, for community dwelling elders, support programs for caregivers, environmental modifications for high risk populations, Vitamin D and calcium supplementation in women, multi-component interventions for UI, behavioural management and / or multi-component interventions for dementia

Summary of Clinical Results

- Strategies that showed some clinical effectiveness, but which may require further review and assessment of feasibility for Ontario setting
  - eTools for health information exchange
  - Stanford CDSMP
- Strategies that were not found to be clinically effective or more effective than available alternatives at improving chronic disease management
  - Advanced access
  - Screen and treat strategy for depression
  - Transitional care (addition of post-discharge support programs)

OCDM Gaps and Limitations

Identified topics that did not get reviewed

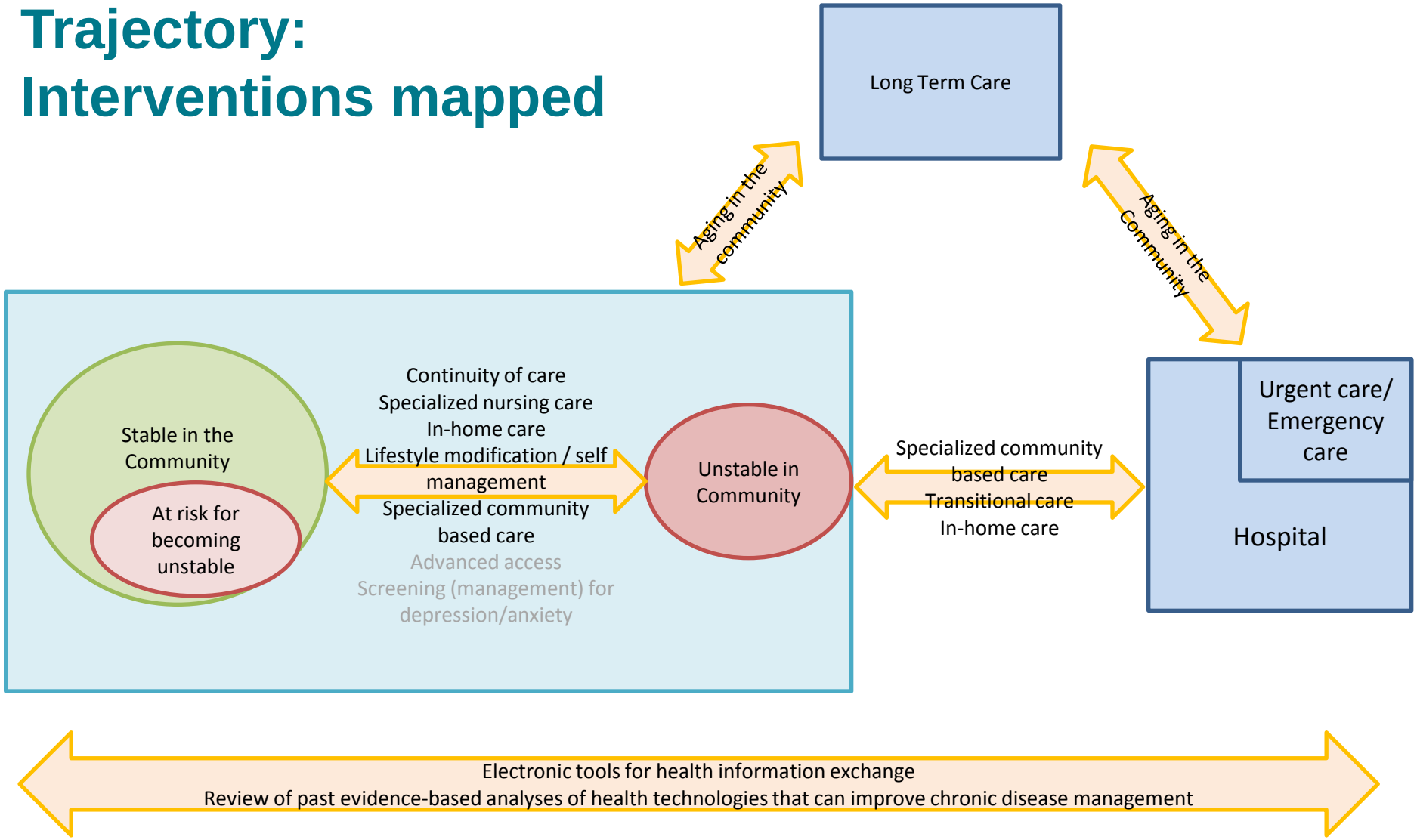
- Care coordination / case management
- Primary care team composition and scope of practice of team members**
- Chronic disease management models
- Electronic medical records - alerts, pop-ups and electronically generated standardized order sets
- Respite care
- Palliative care
- Telehealth / telemonitoring
- Accountable care models

Other limitations

- Reviews often had to be limited in scope because of breadth of work and complexity of interventions
- Interventions could not always be described in detail, i.e., elements of the interventions. In many cases, these varied across studies within reviews
- Reviews could not always be related to all the conditions or outcomes under consideration
- Not all interventions could be included in economic models
- For interventions that were included in the economic models, quality of evidence and statistical and clinical significance are not reflected in the use of point estimates

** Looked only at specialized nursing

Trajectory: Interventions mapped



to review the entire OHTAS report, please go to:
http://www.hqontario.ca/Portals/0/Documents/eds/ohtas/compendium-ocdm-130912-en.pdf
To review the OHTAC recommendation report, please go to:
http://www.hqontario.ca/Portals/0/Documents/eds/ohtas/recommendation-ocdm-130906-en.pdf

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