RISE
Rapid-Improvement Support and Exchange

Building blocks

RISE brief 6 [updated draft]:
Population-health management
(Last updated 12 February 2020)

Overview

Ontario Health Teams (OHTs) will need to learn and improve rapidly to achieve specific targets related to the care experiences and health outcomes of their year 1 priority populations (building block #4). They can then build on these experiences in steadily expanding their priority populations (building block #1) and in-scope services (building block #2) in later years, with the goal of eventually optimizing care experiences and health outcomes in an equitable way for the entire attributed population for which they're accountable, while keeping per capita costs manageable and provider experiences positive (i.e., achieving the quadruple aim).

Box 1: Coverage of OHT building blocks & relevance to sections in the OHT full application form

This RISE brief primarily addresses **building block #4** and secondarily **building blocks #1 and #2**:

1) **defined patient population** (secondary focus)
2) **in-scope services** (secondary focus)
3) patient partnership and community engagement
4) **patient care and experience** (primary focus)
5) digital health
6) leadership, accountability and governance
7) funding and incentive structure
8) performance measurement, quality improvement, and continuous learning

It is relevant to **section 3** (how will you transform care?) **and appendix A** (home and community care) in the OHT full application form.

A key part of this learning and improvement will involve transitioning from responding reactively to the patients seeking care now from OHT partners to being proactive in meeting the needs of the entire attributed population for which the OHT is accountable. OHTs can do this in two ways:

1) take population-health perspectives to the delivery of health (and other human) services in a person-centred and equitable manner, which we call 'population-health management' and which is the focus of this RISE brief; and
2) apply population-based approaches to address the broader social determinants of health (e.g., introducing changes to provincial and municipal policy to make it easier to buy healthy foods in neighbourhood stores, to walk in local neighbourhoods and exercise in local parks, and to have a meaningful job and a living wage), which will be the focus of a separate RISE brief in future.

The former focuses on systematically getting the right mix of prevention, treatment and psychosocial services, including supports for self-management, to all the individuals who need them (or, as we will explain below, to segments of the population with shared needs), while the latter focuses on changing the context in which these individuals live, work and play.

Many OHT partners are focused on responding reactively to the patients now seeking care from their organization (see the smallest of the three 'curves' in the top part of Figure 1). Population-health management involves broadening their focus to include being proactive in meeting the needs of the entire population for which they're accountable, while leaving no one behind (see the middle of the three curves) and expanding and systematically applying their 'toolkit' to include:

1) care pathways, which means proactively offering all components of evidence-based care in an expected care trajectory to those with a particular need for care (e.g., hip surgery, diabetes management, and palliative-care services), including how they are sequenced and timed;
2) 'in-reach' services, which means proactively offering evidence-based services that can promote health, prevent disease and help people live well with their conditions anytime they are 'seen in' or 'touched by' the health

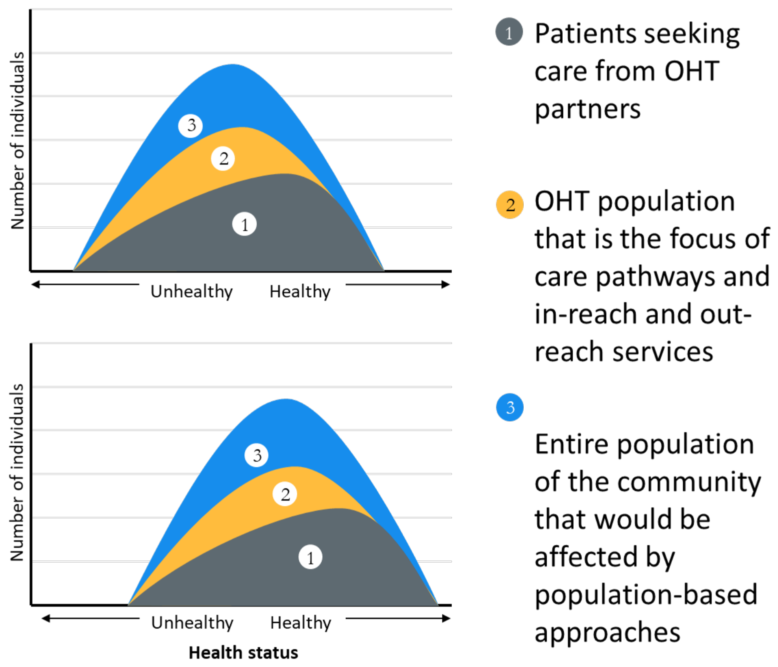
system (within reason); and

3) ‘out-reach’ services, which means proactively connecting with those who are not seeking care now (or have not been ‘seen’ or ‘touched’ for some time) and again proactively offering evidence-based services (like those in point 1 above) in a coordinated way, and removing barriers to accessing these services.

Population-health management also involves active care coordination or care-management strategies as the complexity of delivering or receiving care increases, as well as ongoing self-management and behaviour-change supports for patients, families and caregivers.

The key differences for many OHT partners will be: 1) using mechanisms to identify, enumerate and track people with common ongoing needs across their attributed population (segmentation); 2) using a person-centred approach to deliver a comprehensive array of services that fit these ongoing needs (e.g., chronic medical care, mental health care, preventive care, and palliative care) and that are integrated across the care continuum (care pathways); 3) proactively and opportunistically offering evidence-based services to patients now seeking care from their organizations (in-reach services); and 4) connecting with and supporting those who aren’t (out-reach services). Moreover, all OHT partners will need to actively coordinate care within and across organizations, and apply care coordination or care-management resources to people with complex needs. The goal is to shift the whole population curve from unhealthy to healthy (compare the lower part of Figure 1, with more healthy people, to the upper part) and to do so in a way that respects each person’s autonomy.

Figure 1: ‘Curve’ that OHTs are attempting to shift rightward (adapted from (1))



This RISE brief describes four steps in population-health management that OHTs can undertake in beginning to bring population-health perspectives to the delivery of health and other human services in a person-centred manner: 1) segmenting the OHT’s attributed population into groups (or population segments) with shared needs; 2) co-designing care pathways and in-reach and out-reach services appropriate to each group; 3) implementing pathways and services in a way that reaches and is appropriate to each group; and 4) monitoring implementation and evaluating impact. These activities constitute a first set of activities that can be enriched and added to as OHTs more fully embrace population-health management.

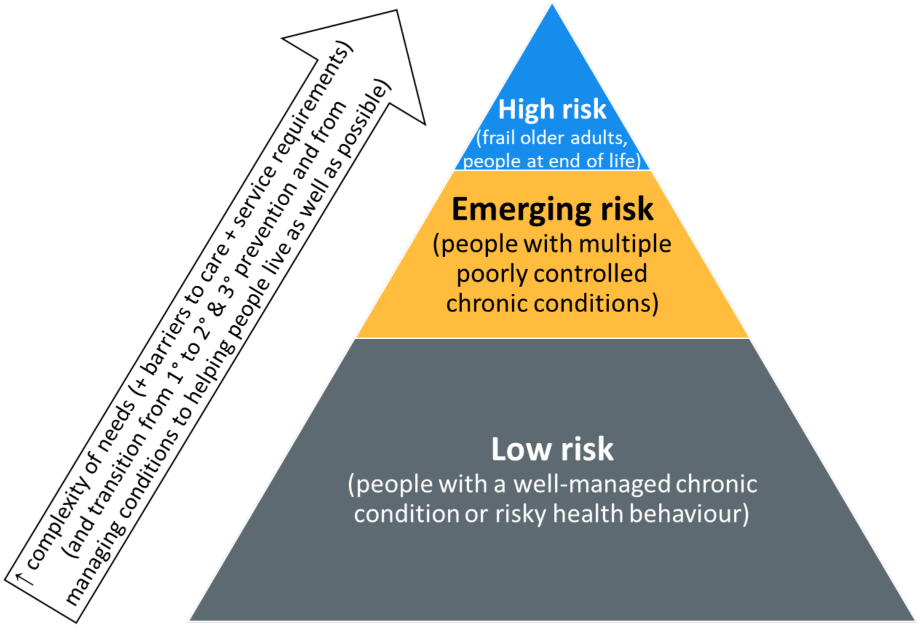
Step 1: Segmenting the OHT’s attributed population into groups with shared needs

Segmenting an attributed population into groups with shared needs involves:

1) using a population risk pyramid (see Figure 2) and developing data-driven mechanisms to divide the attributed population into clinical risk segments that specify groups at high, medium, and low risk based on the complexity of their ongoing health and social needs and their needs for care coordination and care management, with complexity defined by their:
    a. demography (e.g., infants or persons of advanced age),
    b. prior morbidity and multimorbidity profiles obtained from administrative and/or electronic health record data,
    c. nature of prior service utilization (e.g., use of home-care services or care coordination, not enrolled with a primary-care practice, dialysis, emergency-room visits, mental health-related hospitalizations, resident of or on a wait list for a long-term care home);
2) developing mechanisms to identify important barriers to care, such as poverty, homelessness and unstable housing, language or cultural barriers, lack of social supports, poor health literacy, family violence, food insecurity, occupational status, and transportation challenges; and
3) prioritizing groups where the greatest impacts on the quadruple aim can likely be achieved in an equitable way.

In RISE brief 8 about data analytics, we illustrate the many sources of data that can be drawn upon to assist with population segmentation.

Figure 2: Risk pyramid



OHTs have already selected their year 1 priority populations and now can focus on undertaking additional segmentation-related work in a way that lays the groundwork for being a designated OHT that provides a full continuum of care for an attributed population at maturity, which can include considerations such as:

1) will engage a meaningful proportion of their attributed population and meaningful number of their partners; and
2) can be easily documented, spread to other populations, and later scaled to their entire attributed population.

Mississauga Health used five criteria related to anticipated impacts, seven criteria related to operational feasibility, and two criteria related to needed partnerships to select their year 1 priority populations.

Four year 1 priority populations were frequently selected by cohort 1 OHTs:

1) people with chronic conditions, which were sometimes more specifically defined by OHTs as including congestive heart failure, chronic obstructive pulmonary disease, dementia, diabetes, and those with complex-care needs;
2) people with mental health and addictions issues;

3) older adults with greater needs, which was variably defined by OHTs as including 'at risk,' co-morbidities/chronic conditions, complexity, frailty, and high service users; and
4) people at the end of life and/or needing palliative care.

These descriptions of year 1 priority populations:
1) overlap with one another (e.g., an older adult may be living with advanced congestive heart failure and an addiction issue and be accessing palliative-care services);
2) contain some conflicting concepts (e.g., palliative care is usually conceived of more broadly than end-of-life care and often doesn't include medical assistance in dying);
3) use some definitions (e.g., an overall measure of high service use) that can create operational and equity challenges when approaching segmentation and co-designing pathways and services; and
4) will ideally be refined by cohort 1 OHTs in ways that allow as many teams as possible with the 'same' year 1 priority population to work collaboratively towards 'moving the needle' on shared quadruple-aim metrics.

More specifically, OHTs may want to consider whether to focus initially on:
1) only the top level in the risk pyramid, as is implied by at least some of the wording in the descriptions of at least two year 1 priority populations (e.g., frail older adults and people at the end of life); or
2) the top two or all three levels in the risk pyramid.

The more OHTs move up the risk pyramid, the more they are likely to transition from primary prevention to secondary and tertiary prevention, and from managing conditions like diabetes to helping people live as well as possible with complex conditions (or a complex array of conditions).

OHTs may also want to consider how to develop scalable mechanisms (including data platforms) to track patients dynamically so each OHT can:
1) identify patients, assess their complexity and needs (and barriers to care), and stratify them into groups (and re-stratify them as their complexity and needs change);
2) identify and reach patients who are eligible for specific care pathways and in-reach and out-reach services;
3) monitor whether the right pathways and services were received by the right patients and evaluate impacts on their quadruple-aim metrics; and
4) make adjustments to the OHTs' approaches as needed.

We return to some of these points below.

Step 2: Co-designing care pathways and in-reach and out-reach services for each group

Once groups have been prioritized for attention, OHTs can engage patients, families and caregivers to co-design:
1) care pathways (for patients with a particular need for care), which means making decisions about what bundle of services will be proactively offered to which patients (e.g., people living with diabetes or frail older adults);
2) in-reach services (for patients when they are seen by any OHT partner), which means making decisions about what types of services will be offered (to promote health, prevent disease and help people live well with their conditions) and how these services will be offered proactively, opportunistically and in a coordinated way; and
3) out-reach services (for patients not seeking care now), which means making similar decisions about what types of services will be offered proactively, and making decisions about how and when they will be contacted, how and when services will be offered proactively, and how to approach removing barriers to accessing these services.

OHTs may also want to consider how to make decisions about pathways and services in ways that are sensitive to:
1) the best available research evidence (including about cost-effectivenees), quality standards and other inputs;
2) the complexity and needs of different groups (e.g., a frail older adult may have health goals that would not be well served by the aggressive management of each of their chronic conditions);
3) the barriers that each group may face in having their needs met (e.g., lack of stable housing, reliable transportation, and money to pay for non-covered services);

4) the 'in-scope services' provided by their current partners (and any opportunities to expand these partners over time to those offering complementary services that are also needed for specific groups); and
5) the 'spreadability' to other populations and scalability to the entire attributed population.

In RISE brief 9 about evidence sources, we provide the many sources of evidence that can be drawn upon to assist with co-designing care pathways and in-reach and out-reach services. In RISE briefs 15-18 about year 1 priority populations, we provide the many Ontario-specific assets and resources that can also be drawn upon.

Step 3: Implementing pathways and services in a way that reaches and is appropriate to each group

Once groups have been prioritized for attention and care pathways, and in-reach and out-reach services have been co-designed, OHTs can work with their partners to implement the pathways and services. This activity involves making decisions about when, where, by whom and how pathways and services will be provided.

The 'Chronic Care Model' provides a framework in which such decisions can be located (see Figure 3). The model includes six components:

1) self-management support (i.e., empowering and preparing patients to manage their health and healthcare);
2) delivery-system design (i.e., organizing programs and services to assure the proactive, culturally sensitive delivery of effective, efficient clinical care and self-management support by care teams);
3) clinical information systems (i.e., organizing patient and population data to facilitate more efficient care through, for example, an electronic health record that provides reminders for providers and patients and monitors the performance of care teams, OHT partners, and the local health system in which they work);
4) decision support (i.e., promoting clinical care that is consistent with scientific evidence and patient preferences through, for example, embedding evidence-based guidelines, as well as related patient decision aids, into daily clinical practice and supporting their implementation through continuing professional development);
5) health-system changes (i.e., creating a culture, organization and mechanisms that promote safe, high-quality care, which can include visibly supporting comprehensive system change that moves beyond 'silos' for home and community care, primary care, specialty care, rehabilitation care, long-term care, and public health); and
6) community resources (i.e., mobilizing community resources to meet the needs of patients even though these resources are not formally part of healthcare systems).(3;4)

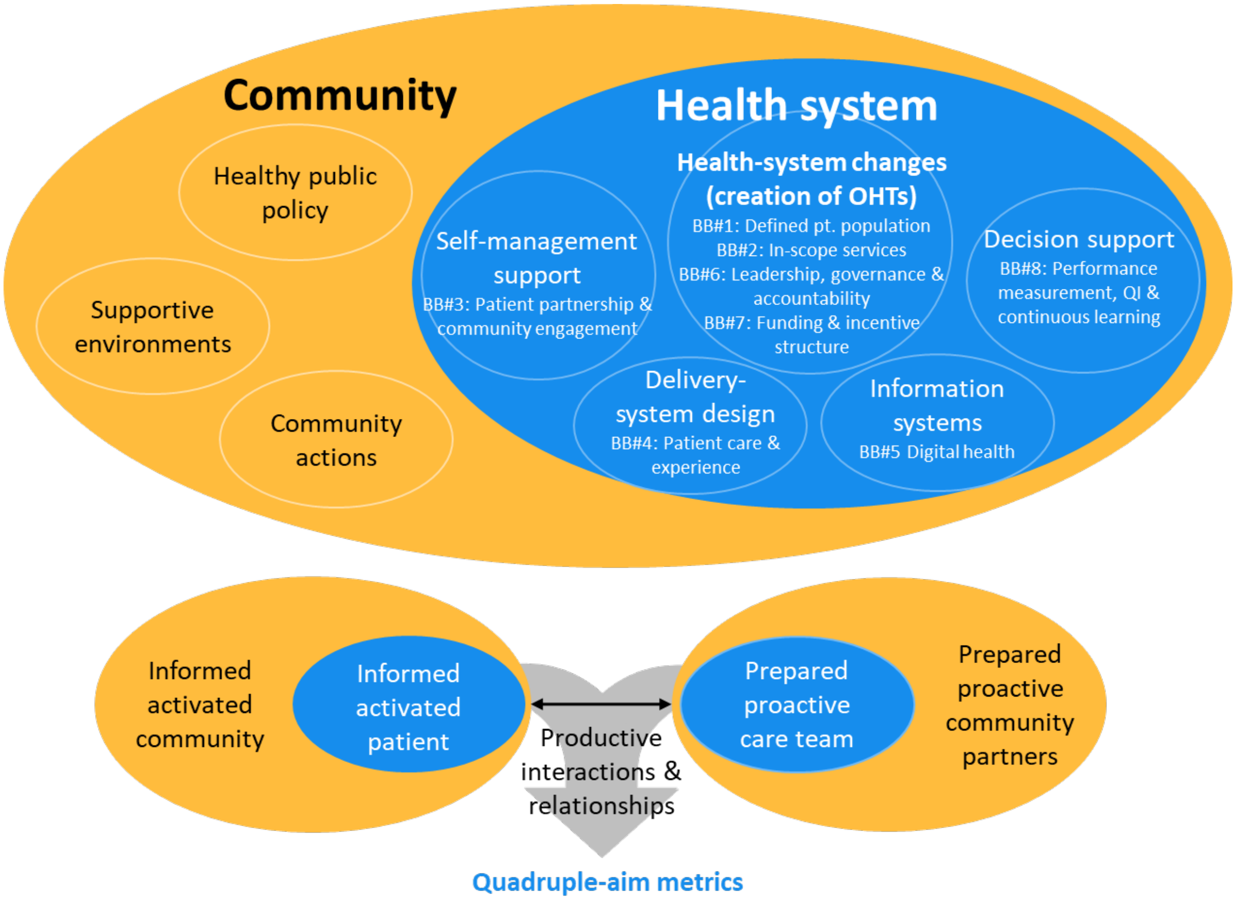
Each of the first four of these components corresponds directly to an OHT building block (BB for short where it appears in Figure 3). The fifth comprises the four OHT building blocks accompanying the creation of OHTs. The sixth has been adjusted to capture three key features of the Ottawa Charter for Health Promotion, not just the complementary resources located in the community.

For example, in making decisions about who will provide pathways and services (which is part of 'delivery-system design' in the Chronic Care Model), OHTs may also want to consider whether and how to assess their partners' capacity to:

1) deliver certain types of services; and
2) work with groups that share needs and barriers to care.

This activity may identify gaps in service provision that need to be filled and barriers to care that need to be addressed. It may also require conversations about which partners can reach which groups in which neighbourhoods with which services most efficiently and equitably, and about how partners need to coordinate their roles to ensure they are delivering services in a person-oriented manner. Filling gaps, addressing barriers and having conversations about the roles of different partners are likely key ingredients to successful implementation.

Figure 3: Incorporating the 'Chronic Care Model' in population-health management



OHTs may also want to consider how to support the types of behaviour changes among patients and providers that are needed to implement care pathways and in-reach and out-reach services. The three components of the 'Behaviour Change Wheel' can be used to work through how best to provide such support:

1) sources of behaviour, namely capability, motivation and opportunity to engage in the behaviour;
2) strategies to change behaviour, such as education, modelling, persuasion, training and enablement (i.e., increasing means or reducing barriers to increase capability or opportunity); and
3) policies to support strategies, such as guidelines, communications/marketing, and services (e.g., navigation).

More detail about this approach is provided in the RISE brief 4 about primary-care leadership and engagement.

OHTs may want to consider as well how to support the types of collaborative governance and leadership among OHT partners that are needed to support the transformation to a population-health management approach across their entire attributed population. More detail about this approach is provided in the RISE brief 3 about collaborative governance, and coaching and related supports for such work will be provided through the ADVANCE team, which is part of the OHT Central Program of Supports.

Monitoring implementation and evaluating impact

Monitoring has come up in each of the three previous sections:

1) monitoring patients to identify changes in their complexity and needs (and barriers to care) and re-stratifying them in different groups as needed;
2) examining whether the right care pathways and in-reach and out-reach services reached the right patients (and thereby capturing both underuse and overuse); and
3) measuring the performance of care teams, OHT partners and the local health system in which they work.

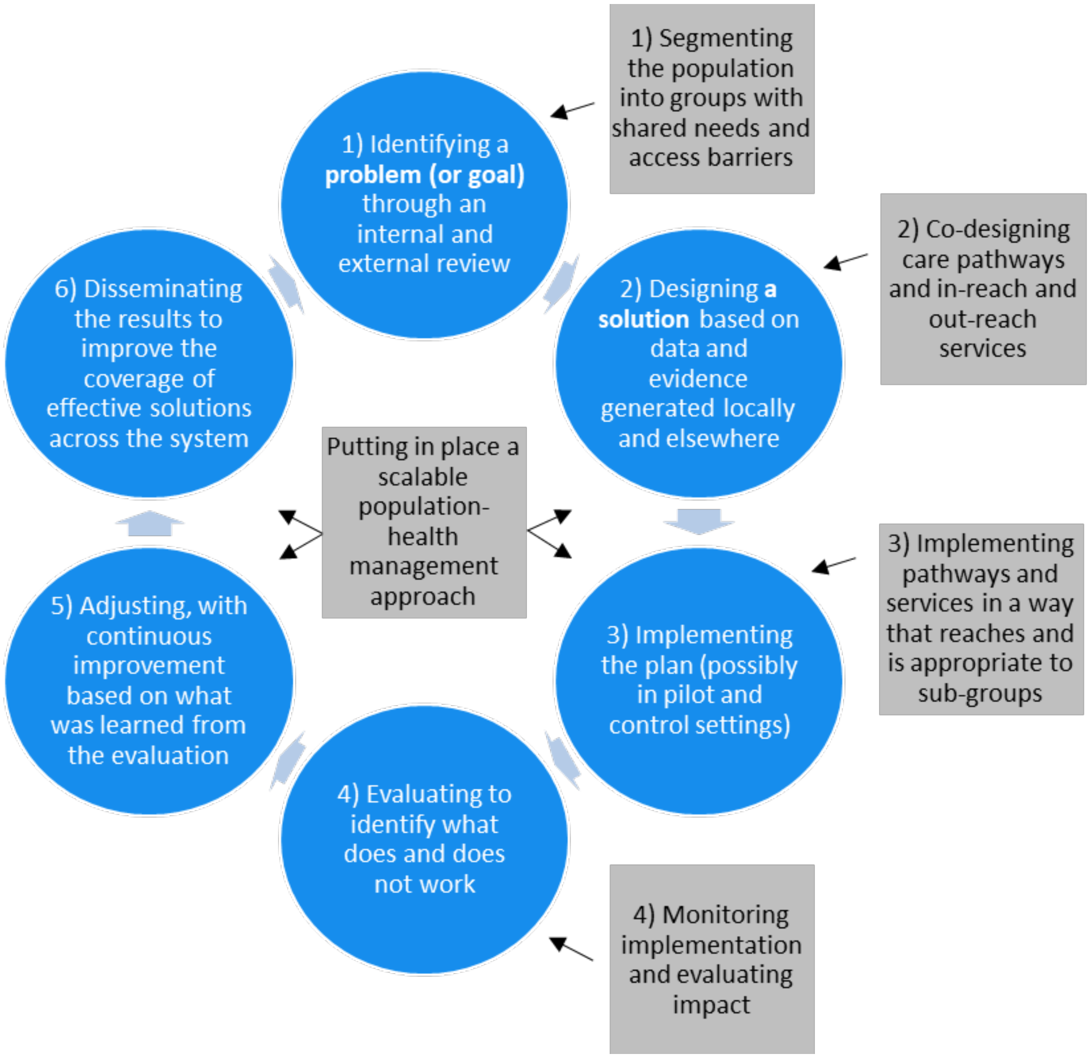
Evaluation has also come up in relation to what pathways and services and implementation approaches do and do not work in terms of achieving impacts on quadruple-aim metrics related to care experiences, health outcomes, per capita costs, and provider experiences. A framework, logic model or other tool to describe how pathways/services are anticipated to affect metrics related to implementation and impacts can be helpful in design a monitoring and evaluation plan.

Ideally cohort 1 OHTs will work collaboratively and with the OHT Central Program of Supports to identify a manageable number of metrics to evaluate progress in 'moving the needle' for year 1 priority populations. Common metrics will allow OHTs to learn from one another to improve as rapidly as possible.

Conclusion

Teams on an OHT readiness path, including cohort 1 OHTs, will ideally apply a rapid learning and improvement lens to putting in place a scalable population-health management plan (see Figure 4).

Figure 4: Mapping the approach onto a rapid-learning and improvement cycle



For cohort 1 OHTs, we return to steps 1-4 in RISE briefs 15-18 about year 1 priority populations, where we provide the many Ontario-specific assets and resources that can be drawn upon in this work. We also return to steps 1-3 in RISE brief 8 about data analytics and in RISE brief 9 about evidence sources. The essential points from RISE briefs 6 (this one), 8 and 9 are captured in a RISE summary sheet.

In a future complementary RISE brief we will describe how population-based approaches can be used to address the broader social determinants of health (e.g., advocating for or introducing changes to provincial and municipal policy to make it easier to buy healthy foods in neighbourhood stores, to exercise in local parks, and to have a meaningful job and a living wage).

References

1) Washington AE, Coye MJ, Boulware LE. Academic health systems' third curve: Population-health improvement. JAMA 2016; 315(5): 459-460.
2) Vuik SI, Mayer EK, Darzi A. Patient segmentation analysis offers significant benefits for integrated care and support. Health Affairs 2016; 35(5): 769-774.
3) Wagner EH, Austin BT, Von Korff M. Organizing care for patients with chronic illness. Milbank Quarterly 1996; 74(4): 511-44.
4) The Robert Wood Johnson Foundation website. The Chronic Care Model. www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&s=2.

Waddell K, Reid R, Lavis JN. RISE brief 6 (updated): Population-health management. Hamilton, Canada: McMaster Health Forum; 2020

RISE prepares both its own resources (like this RISE brief) that can support rapid learning and improvement, as well as provides a structured 'way in' to resources prepared by other partners and by the ministry. RISE is supported by a grant from the Ontario Ministry of Health to the McMaster Health Forum. The opinions, results, and conclusions are those of RISE and are independent of the ministry. No endorsement by the ministry is intended or should be inferred.

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