RISE
Rapid-Improvement Support and Exchange

Peer profile

RISE brief 35: Implementing integrated clinical pathways using a population-health management approach

Context

RISE co-designed with OHTs a process to create a peer profile for OHT priorities, The first wave of peer profiles is provided in Box 1, and this may change.

A peer profile describes the experiences and lessons learned from members of the I-12 and from other OHTs who have particularly rich insights to share about a given priority, while providing all OHTs with an opportunity to learn from peers and collaborate in efforts to advance a useful resource that can be used by all teams.

This peer profile is focused on implementing integrated clinical pathways (ICPs) using a population-health management (PHM) approach. It is complemented by: 1) a recording of the peer sharing and learning session where the slides on which the peer profile is based were presented by the OHTs and RISE and discussed with participants (see Box 2); 2) the slides in PDF format; and 3) the slides developed specifically by RISE available in editable PowerPoint format. Readers are encouraged to listen to the recording or relevant 'chapters' in it and to adapt and use the PowerPoint if helpful.

Profiled OHTs were selected based on their self-identification as having experiences and lessons to share, a desire to ensure balanced coverage across the I-12 and the regions, and input from Ontario Health. The four profiled OHTs are:

- Couchiching OHT
- Frontenac, Lennox and Addington OHT
- Mississauga OHT
- Nipissing Wellness OHT (NWOHT).

Additional details about each OHT – its region, attributed population size, and contributors to this peer profile – are provided in Exhibit 1.

Box 1: Coverage of OHT priorities

This RISE brief addresses an OHT clinical priority – implementing integrated clinical pathways (ICPs) using a population-health management (PHM) approach– and is part of a series of peer profiles. Our next peer profiles will address primary-care enablement priorities, specifically: 1) establishing a Primary Care Network; 2) improving primary-care access and attachment

Box 2: Accompanying recording

This RISE brief is accompanied by a recording of a peer sharing and learning session in which the four profiled OHTs shared their 'story so far.' These OHT stories are bracketed by a RISE presentation of the key frameworks and concepts used in this peer profile and a RISE presentation about the cross-cutting experiences and lessons learned: 1) with the journey; 2) in relation to PHM steps; 3) in relation to OHT building blocks; 4) in relation to barriers and facilitators; and 5) from a Northern perspective. The recording concludes with: 1) some reactions from session participants; and 2) an overview of available resources and next steps. We encourage you to listen to some or all of the recording.

'Chapter' in recording	Minute mark	Direct link
Context for session	0:00	Context
'Story so far' from profiled OHTs	16:25	Story so far
• Couchiching OHT	• 16:50	• COHT
• Frontenac, Lennox and Addington OHT	• 23:53	• FLA
• Mississauga OHT	• 29:25	• MOHT
• Nipissing Wellness OHT	• 35:02	• NWOHT
Experiences and lessons learned from RISE's perspective	42:40	RISE
Reactions from participants	1:06:11	Participants
Wrap up with resources & next steps	1:22:08	Wrap up

Note that the recording mentions the sequence and timing of future peer sharing and learning sessions, however, some of these have changed since the date of the recording.

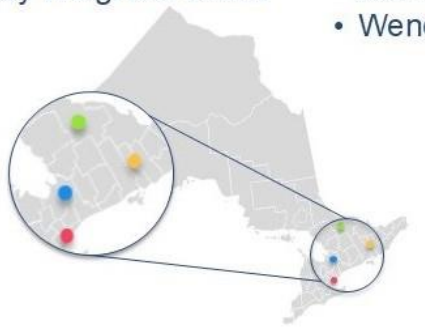
Exhibit 1: Profiled OHTs

Couchiching OHT
(Central Region,
68,440)
- Sandy Dupuis
- Thomas Jilek

Frontenac, Lennox &
Addington (FLA) OHT
(East Region; 221,796)
- Dendra Hillier
- Aws Almufleh
- Mike Fitzpatrick
- Ali Somers
- Kim Morrison

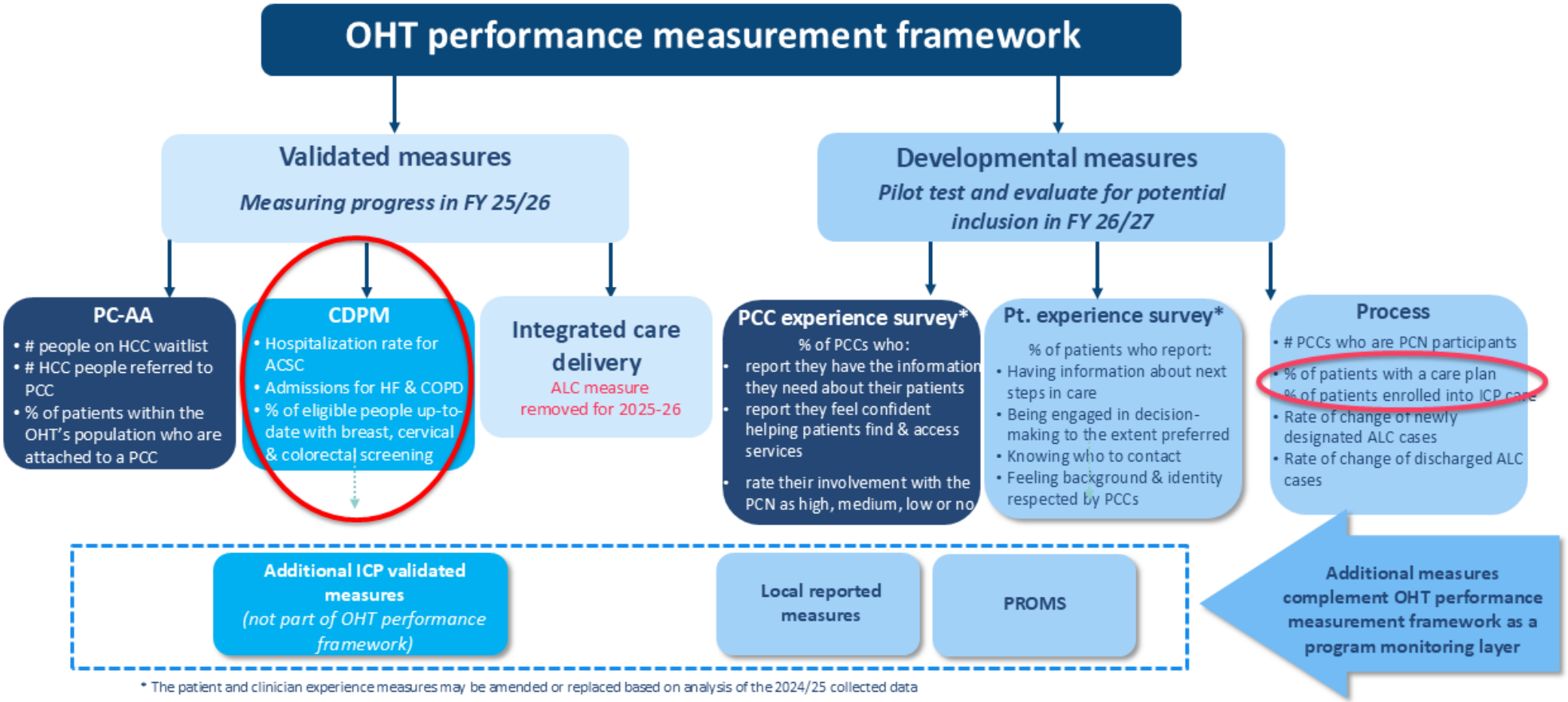
Mississauga OHT
(Central Region; 941,174)
- Lindsay Wingham-Smith

Nipissing Wellness OHT
(North East Region; 99,096)
- Jon Kwok
- Wendy Smith



Some measures included in the OHT performance measurement framework pertain directly to ICPs, while other measures complement the OHT performance measurement framework as a program monitoring layer for ICPs. These measures are shown in the lower left and lower right parts of Exhibit 2.

Exhibit 2: ICP measurement and evaluation overview [Source: Ontario Health]



Legend for abbreviations

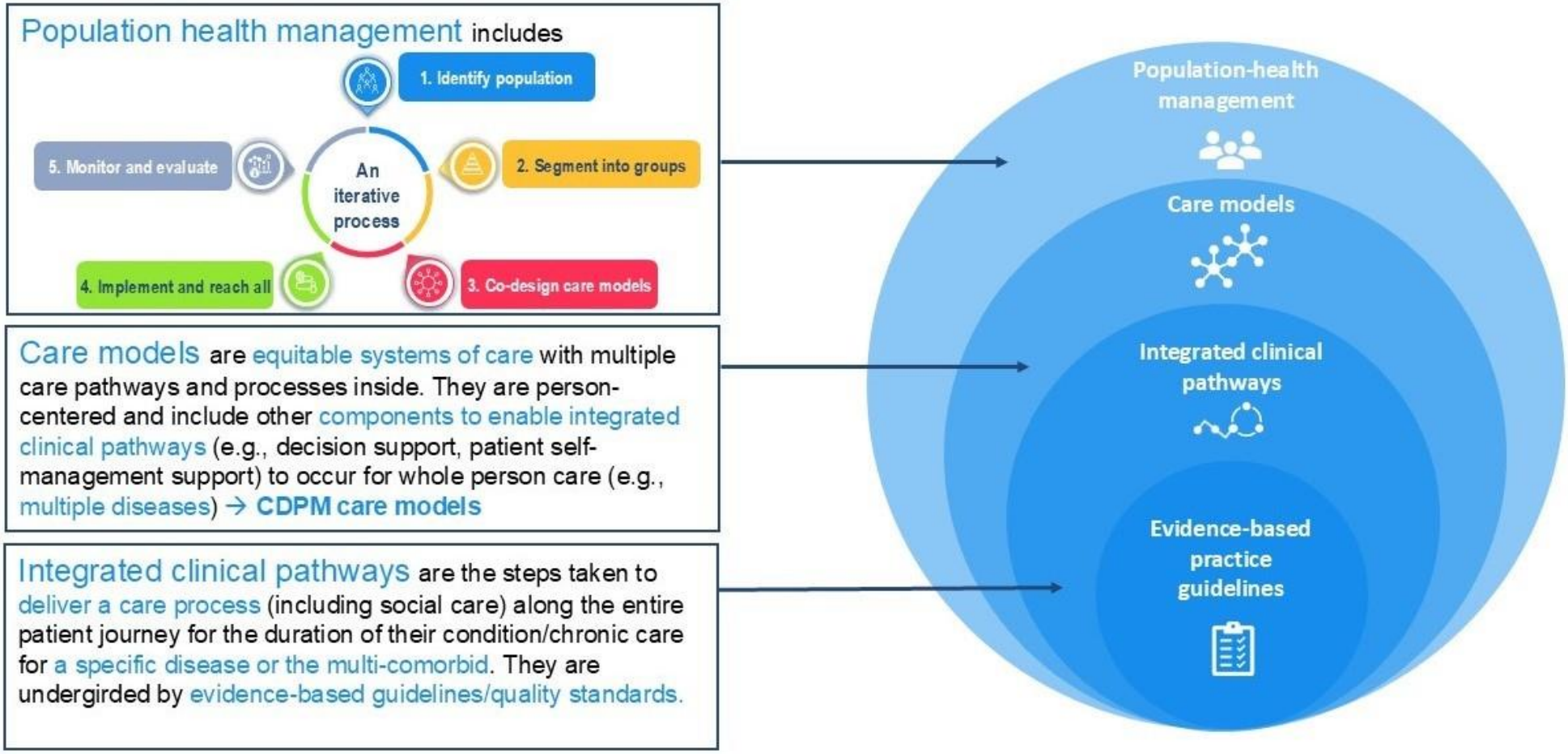
- ALC = alternative level of care
- ACSC = ambulatory care-sensitive conditions
- CDPM = chronic disease prevention & management
- COPD = chronic obstructive pulmonary disease
- HCC = Health Care Connect
- HF = heart failure
- PC-AA = primary-care access & attachment
- PCN = Primary Care Network
- PCP = primary-care provider

Legend for colours

- Red is a primary focus here
- Yellow is a secondary focus

ICPs build upon Ontario Health quality standards and other guidelines and can be operationalized within chronic disease prevention and management (CDPM) care models and a broader PHM approach, as shown in Exhibit 3.

Exhibit 3: How ICPs relate to evidence-based practice guidelines, care models, and a PHM approach

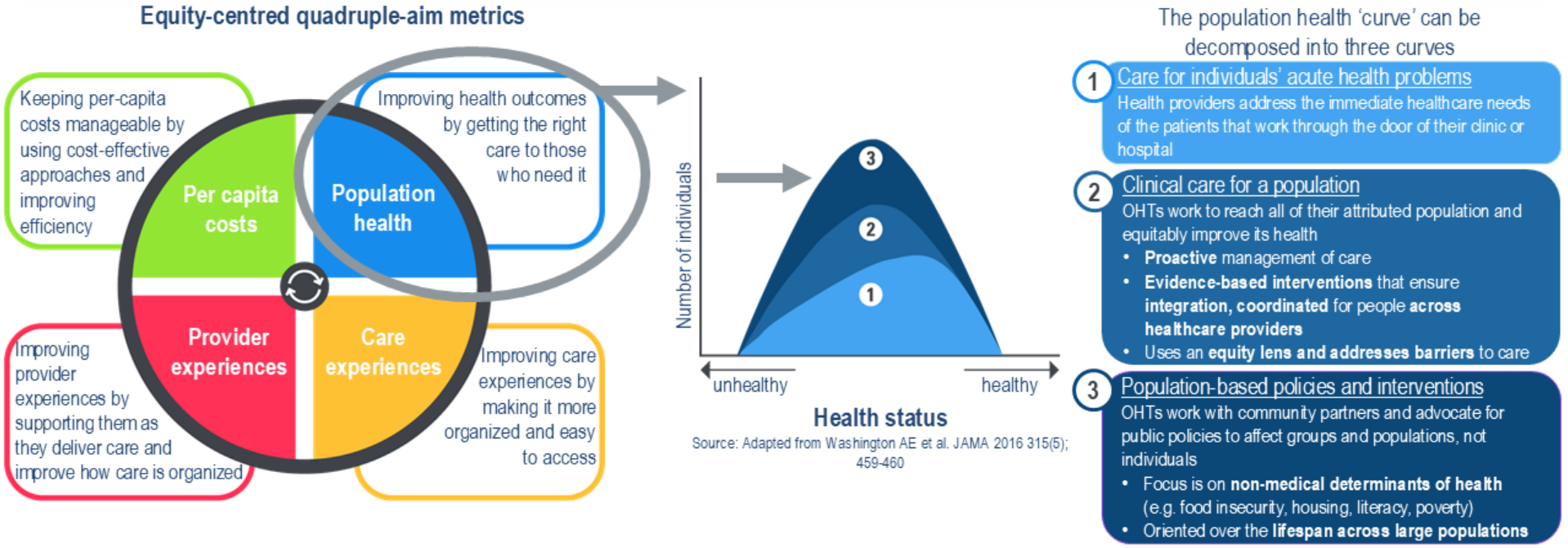


PHM is a five-step, iterative approach to improving clinical care for a population, as shown in Exhibit 4.

Exhibit 4: A PHM approach

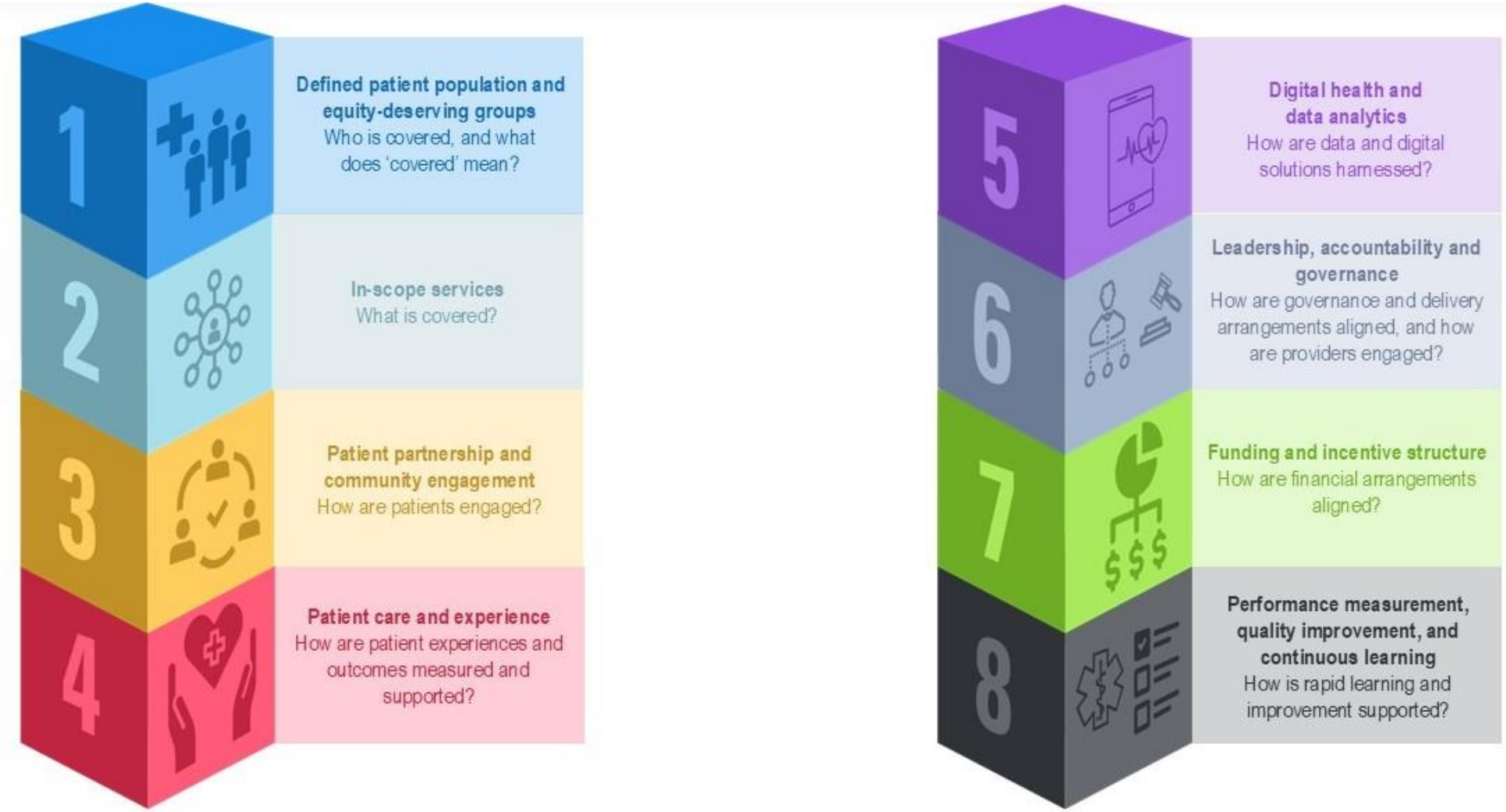
PHM is one of three ways to shift and narrow the population-health curve, as shown in Exhibit 5.

Exhibit 5: Three ways to shift the population-health curve



Initiatives to implement ICPs using a PHM approach can both leverage the OHT building blocks, which are shown in Exhibit 6, and provide a vehicle for creating or strengthening some of these building blocks.

Exhibit 6: OHT building blocks



While we will return to chronic disease prevention and management in a future peer profile, it is important to note that there are connections between the OHT building blocks and the elements of most chronic disease prevention and management (CDPM) models, as shown in Exhibit 7. Here we use the specific language from Ed Wagner's Chronic Care Model.

Exhibit 7: Connections between the OHTN building blocks and the CDPM model

Building block	Model element
1) Defined patient population and equity-deserving groups	
2) In-scope services	
3) Patient partnership & community engagement	• Self-management support
4) Patient care & experience	• Delivery system design
5) Digital health and data analytics	• Provider decision support • Clinical information systems
6) Leadership, accountability and governance	• Health system • Community action, supportive environments, and healthy public policy
7) Funding and incentive structure	
8) Performance measurement, QI & continuous learning	

'Story so far' from profiled OHTs

RISE asked each OHT to tell the 'story so far' in their efforts to implement ICPs using a PHM approach. You can listen to the recordings of each of these 'stories' by clicking on a link in Box 2, as well as access the slides in PDF format. We encourage you to listen to these OHTs' stories in their own words.

RISE summarized the highlights from these stories based both on each team's presentation at the peer sharing and learning session and on our original interviews with each OHT prior to the session. These highlights can be found in Exhibits 8-11.

Exhibit 8: Couchiching OHT (COHT) highlights from RISE's perspective

- Journey
  - Foundation: Existing community-based HF clinic as a model
  - Near-term win: Expanded to COPD, and engaged primary care with dedicated 'leads' (nurse practitioner and family physician)
  - Long-term goal: Continuing to move to a chronic disease prevention and management (CDPM) model
- Experiences in relation to PHM steps
  - Step 3: Modeled an existing HF clinic and co-designed with community partners
- Experiences in relation to OHT building blocks
  - Building block (BB) #3: a) Patient and family advisory council engaged throughout the process, including the final review of the process map; b) Patients with lived experience were interviewed
  - BB #4: Future PREMs and PROMs work (wave 1)
  - BB #5: a) Chronic-disease hub staff on the same instance of TELUS as >50% of the primary-care providers; b) Worked with OSMH privacy officer to expedite access to CERNER (EMR) for core hub staff
  - BB #6: Nurse practitioner lead for HF and family physician lead for COPD
- Experiences in relation to facilitators (and barriers)
  - Engagement: Project team of 10-12 people plus a facilitator, regular meetings and an open-tent approach, as well as an upcoming 'reflection' event planned
  - Engagement related to Indigenous peoples: Regional Indigenous cultural safety coordinator has helped with staff training and has worked as an intermediary with Indigenous groups in the area
  - Co-location: Existing HF clinic in a Family Health Team building provided some colocation-related momentum
  - Electronic health records: Lack of shared EMRs and instant-messaging solution for community providers (e.g., community paramedicine) remains a challenge

Exhibit 9: Frontenac, Lennox and Addington OHT highlights from RISE's perspective

- Journey
  - Foundation: Unified community of primary-care providers and specialists who share the care of patients with HF and COPD; enlisted Best Care to assist some primary-care providers
  - Near-term win: a) Implemented 12 care pathways and an expedited approval process for future ones; b) Periodic primary-care | specialists council meeting to build on collaboration and address care gaps
  - Long-term goal: Continuing to move to a CDPM system
- Experiences in relation to PHM steps
  - Step 1: Identified 18,000 patients with HF and COPD (based on OH data)
  - Step 3: Leveraged BestCare model in a targeted way
- Experiences in relation to OHT building blocks
  - Building block (BB) #1: Attributed population and geographic 'catchment' area highly overlapping
  - BB #3: Two particularly active people with lived experience
  - BB #5: Leveraged primary-care data from POPLAR
  - BB #6: 'One voice' for primary care, engaged tertiary-care hospital partner, and clinical leaders from both willing to proactively bring on board colleagues
- Experiences in relation to facilitators (and barriers)
  - Engagement: Clinical leaders willing to proactively bring on board colleagues
  - Engagement related to Indigenous peoples: Liaised with local Indigenous health council
  - Funding: Funding for home care leading project accelerated remote patient monitoring and paramedicine engagement
  - Electronic health records: several EMRS being used in primary care, which complicates data analytics work

Exhibit 10: Mississauga OHT (MOHT) highlights from RISE's perspective 

- Journey
  - Foundation: Focus on unattached patients, commitment to population-health management, and broader investment in change management
  - Near-term win: Playbook for adding additional ICPs and for broader transformation
  - Long-term goal: Continuing to move to a CDPM system
- Experiences in relation to PHM steps
  - Overall: Most explicitly aligned their ICP work with a PHM approach
  - Step 2: Conducted formal population segmentation
- Experiences in relation to OHT building blocks
  - Building block (BB) #1: Focus on unattached patients
  - BB #3: Co-design sessions have PFaC representatives and significant attention to creating engagement-capable environments
  - BB #4: Developing self-management supports as part of designing and implementation PRMs
  - BB #8: Significant investment in change management that will serve all aspects of the work in future, including articulating the value add of participating in high-complexity work
- Experiences in relation to facilitators (and barriers)
  - Funding: Funding for primary care team-based expansion and other OH funding provided momentum, particularly for focus on unattached patients
  - Data sharing: Not being able to find the 'unattached' is a big roadblock

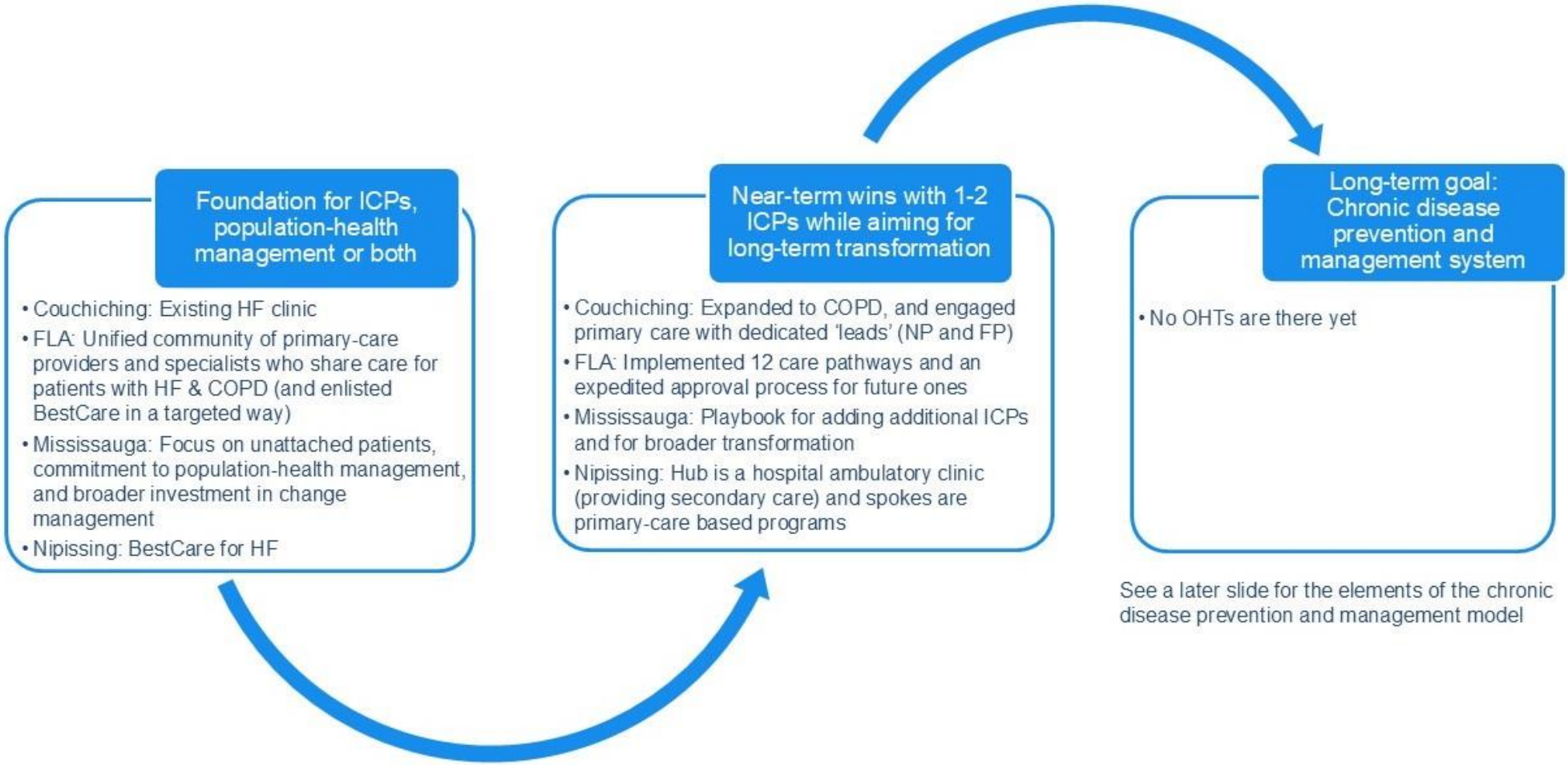
Exhibit 11: Nipissing Wellness OHT (NWOHT) highlights from RISE's perspective 

- Journey
  - Foundation: BestCare for HF
  - Near-term win: Hub is a hospital (NBRHC) ambulatory clinic (providing secondary care) and spokes are primary-care based programs
  - Long-term goal: Chronic disease hub and spoke model
- Experiences in relation to PHM steps
  - Step 1: 3,100 patients with a diagnosis of HF; 600 unattached
  - Step 4: Documented improvements in quality of life (KCCQ score) and reductions in hospital admissions, ED visits, and unscheduled primary-care provider visits
- Experiences in relation to OHT building blocks
  - Building block (BB) #6: Clinical leadership and respiratory therapist helped to drive the work
- Experiences in relation to facilitators (and barriers)
  - Funding: Better off when integrated funding goes to OHT or a community partner, and when the region can work together to sustainably fund initiatives that could benefit all OHTs in the region

Experiences and lessons learned from RISE's perspective

RISE also summarized particular highlights from the OHT stories as they pertained to: 1) the journey; and 2) experiences in relation to PHM steps. These highlights can be found in Exhibits 12-13.

Exhibit 12: Experiences with the journey



See a later slide for the elements of the chronic disease prevention and management model

Exhibit 13: Experiences in relation to the PHM steps

PHM steps	Experiences
General	• Mississauga: Most explicitly aligned their ICP work with a PHM approach
1. Identify population	• FLA: Identified 18,000 patients with HF or COPD • Nipissing: Identified 3,100 patients with a diagnosis of HF; 600 unattached
2. Segment into groups	• Mississauga: Conducted formal population segmentation
3. Co-design care models	• Couchiching: Existing community-based HF clinic as a model • FLA and Nipissing: Leveraged BestCare model
4. Implement and reach all	
5. Monitor and evaluate	• Nipissing: Documented improvements in quality of life (KCCQ score) and reductions in hospital admissions, ED visits and unscheduled primary-care provider visits

Based on their extensive experience working with OHTs and with teams in Canada and the U.S., the RISE coaches noted some problems that can arise when not using a PHM approach:

- project orientation, with many 'projects' that are not connected or only loosely connected
- lack of data-driven decision-making, with a reliance on expert opinions of community partners to determine gaps in the local system
- diluted improvement of outcomes for total population: Improvements in project-focused sub-populations only
- budget allocations for short-term gains versus long-term system building and sustainable integration.

They also described key change concepts when building a system of chronic disease prevention and care:

- primary care is at the centre of care, and primary care engagement from the outset is critical
- primary-care providers are at the helm of leadership teams; other community partners are at the leadership table but agree that primary care is the centre of care
- data to support PHM is essential; this includes data at the system level to monitor outcomes and data at the local level to deliver care (e.g., data dashboards, primary-care registry capabilities)
- evidence-based guidelines are built into information system such that it is hard NOT to deliver evidence-based care
- standardized referral systems may be disease-agnostic and are supported by referral agreements between agencies
- patients receive some level of self-management support no matter where they touch the system; this includes education but also evidence-based behaviour change interventions designed to build patient confidence to self-manage their illness effectively
- community resources (e.g., from community-based organizations) are readily available to address the social determinants of health
- equity is assured with respect to access to care and quality of care
- patient visits are planned (especially in primary care) versus reactive, which includes providers having the right information at the time of the visit, patients understanding how and why visits are occurring, and agenda setting being part of the visit.

The RISE coaches observed that most teams are in the earlier stages so questions tend to be about understanding needs (e.g., data leveraged, surveys used, pathway structure, etc.) and about how to engage primary care and to choose a place to start improvement along the pathway. They also noted that most teams are using 'bits and pieces' of the PHM approach and that many teams are getting stuck in care model co-design (step 3). With regard to the latter point, such teams are trying to tackle the whole pathway at once and struggle to choose an initial place to start improvement or struggle to gain volunteers to begin testing them (especially in primary care).

Based on these observations, the RISE coaches developed a list of questions that they ask to encourage a more comprehensive application of the PHM approach. These questions are provided in Exhibit 14.

Exhibit 14: Questions that encourage a more comprehensive application of the PHM approach

PHM steps	Examples of questions the coaches ask to encourage a more comprehensive application of the PHM approach
1. Identify population	• How did you get started? • What data did you look at which helped you prioritize HF or COPD (or choose your priority populations) as an area of focus? • Who on the team did data analysis (if anyone)?
2. Segment into groups	• How did you initially approach segmentation (e.g., community partner expertise, research/clinical literature)? • How did you think about the spectrum of need (e.g., some teams developed escalation processes and identified needed care for each segment)? • What data did you look at to understand your population's needs (e.g., hospital data, CHC/PC data, etc.)? • How did you understand the patient and provider perspective? • How did you understand inequities (e.g., surveys include SDOH questions)? • How did you understand service utilization and what did you learn (e.g., lots of services for those who were very sick, but not enough services for assessments etc.)? • How did you choose an initial segment of focus?
3. Co-design care models	• How did you connect your improvements to the needs you saw? Did you connect to other OHT priorities too (e.g., MHA – include screening for depression)? • What evidence-based concepts did you use to help identify change ideas (e.g., quality standards)? • How did you gain PC engagement (in the co-design and in testing)? • How did you decide which changes to start testing? • What did you learn from your tests and how are you changing approaches based on learnings? • In general, were you improving existing models of care or creating new ones? • How did you engage other community partners (e.g., home care, community-based care, specialty care, public health) in changing they way they worked?
4. Implement and reach all	• How are you thinking about spreading and scaling sustainable care? • How are you thinking about increasing reach (e.g., those unattached to primary care)? • What barriers to spread were encountered and how did you overcome them?
5. Monitor and evaluate	• How are you measuring the improvements? • What initial results can you share? • Who is responsible for monitoring & evaluation (e.g., OHT backbone supports, shared responsibility across key community providers)?
General	• What are your next steps? • In retrospect, did you skip over some key steps, and would it be helpful to return to one or more of them? • Are the right people in the room (including from the local OH region)? Who might be missing?

RISE also summarized particular highlights from the OHT stories as they pertained to: 1) experiences in relation to OHT building blocks; 2) experiences in relation to barriers and facilitators; and 3) experiences from a Northern perspective. These highlights can be found in Exhibits 15-17.

Exhibit 15: Experiences in relation to OHT building blocks

Building block	Experiences
1. Defined patient population and equity-deserving groups	• FLA: Attributed population and geographic 'catchment' area highly overlapping • Mississauga: Focus on unattached patients
2. In-scope services	
3. Patient partnership & community engagement	• FLA: Two particularly active people with lived experience, one living with HF and involved in that work and one from the PFaC advisory council who is involved in the COPD work; involved in co-creating a patient-conversation guide • Mississauga: All planning tables have PFaC representatives and significant attention to creating engagement-capable environments
4. Patient care & experience	• Mississauga: Prioritized self-management supports
5. Digital health and data analytics	• Couchiching: Giving five community-based staff access to CERNER (hospital) EMR really helped • FLA: Leveraged primary-care data from the POPLAR (Primary care Ontario Practice-based Learning and Research) network, which in turn is connected to CPCSSN (the Canadian Primary Care Sentinel Surveillance Network)
6. Leadership, accountability and governance	• Couchiching: Nurse practitioner leader for HF and family physician leader for COPD • FLA: 'One voice' for primary care, engaged tertiary-care hospital partner, and clinical leaders from both willing to proactively bring on board colleagues • Nipissing: Clinical leadership and respiratory therapist helped to drive the work
7. Funding and incentive structure	
8. Performance measurement, QI & continuous learning	• Mississauga: Significant investment in change management that will serve all aspects of the work in future, including articulating the value add of participating in high-complexity work

Exhibit 16: Experiences in relation to facilitators (green) and barriers (red)

	Engagement • Couchiching: Project team of 10-12 people plus a facilitator, regular meetings and an open-tent approach, as well as upcoming 'reflection' event planned • FLA: Clinical leaders willing to proactively bring on board colleagues
	Engagement related to Indigenous peoples • Couchiching: Regional Indigenous cultural safety coordinator has helped with staff training and worked as an intermediary with Indigenous groups in the area • FLA: Liaised with the local Indigenous health council
	Funding • FLA: Funding for home care leading project accelerated remote patient monitoring and paramedicine engagement • Mississauga: Funding for primary care team-based expansion and other OH funding provided momentum, particularly for a focus on unattached patients • Nipissing: Better off when integrated funding goes to OHT or a community partner, and when the region can work together to sustainably fund initiatives that could benefit all OHTs in the region
	Co-location • Couchiching: Existing HF clinic in a Family Health Team building provided some colocation-related momentum

	Electronic health records • Couchiching: Lack of instant messaging solution for community paramedicine remains a challenge • FLA: Several EMRs being used in primary care, which complicates data analytics work
	Data sharing • Mississauga: Not being able to find the 'unattached' is a big roadblock (although this is now being addressed through improvements in Health Care Connect data)

Exhibit 17: Experiences from a Northern perspective

- Limited availability, accessibility and comprehensiveness of meaningful population data [BB#1, BB#5, BB#8]
- Limited flexibility and lack of time (templates, reporting) to co-design pathways that include Indigenous peoples' and communities' lenses [BB#3, BB#6, BB#7] – e.g., travel within an OHT or across neighbouring OHTs requires flights

- Chronic, extreme shortages in health workforce resources – hard to manage multiple, competing priorities including implementing change initiatives, and providing comprehensive self-management support [BB#4, BB#6]
- Performance measurement focuses on hospital-based/specialist indicators, which are unlikely to be impacted by ICP change initiatives [BB#8]

- Opportunities to align with local and regional initiatives (e.g., Meditech Expanse implementation) [BB#5]
- Support for local AND regional approaches (e.g., Regional Specialized Services Network, North East Collaborative), requires additional time and engagement strategies [BB#3, BB#6], but could make for more efficient resource use

Resources and next steps

The profiled OHTs, the Ministry of Health, Ontario Health, RISE and other partners have made available resources to support the establishment of ICPs. These resources are listed in Exhibits 18-20.

Exhibit 18: Resources from the profiled OHTs

OHT	Resources	Value add of key resources
Couchiching	• Process map for future state, including role descriptions ○ ECP = essential care partner ○ OCO = Ontario Caregiver Organization	• Includes role descriptions for ICP-involved staff
FLA	• Workflows: 1) HF; 2) COPD • Slides for use in clinical engagement (25 July 2024)	• Illustrates workflows for two conditions • Resource for engaging family physicians and specialists
Mississauga	• Slides describing approach (available upon request) • Playbook (available upon request) • 'Understanding our community' tool	• Illustrates approach to ICP work • Practical steps in advancing ICP work • Example of a data tool
Nipissing Wellness	• Current and future state: 1) HF; 2) COPD	• Contrast between current state and future state

Exhibit 19: Resources from the Ministry of Health and Ontario Health

Type	Resources	Description or consideration
Quality standards	• HF (2022) • HF companion document • HF spoke-hub-node model & in more detail • COPD (2023) • COPD companion document • Diabetic foot ulcers (2017) • Prediabetes & type 2 diabetes (2021)	• Ontario Health's HF quality standard • Two-page summary of the HF quality standard • Description of a care model used widely in Ontario • Ontario Health's COPD quality standard • Two-page summary of the COPD quality standard • Guidance for a frequently related condition • Guidance for a frequently related condition
Communities of practice	• OHT Shared Space (one community for each of HF, COPD, and lower-limb preservation; Indigenous health folder within 'lower-limb preservation' community of practice; COPD implementation toolkit	• Opportunities for shared dialogue on pathways, as well as a collection of resources
Chronic care	• Preventing and managing chronic disease: Ontario's framework (2007)	• Old but still relevant framework for chronic disease prevention and management
Equity	• Health equity, inclusion, diversity and anti-racism framework (2023) • Social determinants of health framework and resource guide (2025)	• Equity framework for use in ICP work • Framework and guide that position equity within a social determinants of health approach

Exhibit 20: Resources from RISE and other partners

Developer	Resources	Value add of key resources

RISE	• Slides illustrating ICP work using a PHM approach
	  ○ PHM digital functionality recommendations
	  ○ Diabetes use case example for digital functionality
	• RISE brief on PHM
		• Resource to help with ICP work using a PHM approach
		• More detail about the PHM approach

Canadian Cardiovascular Society	• HF management guideline (2017)	• HF guideline from a specialty society
Evidence2Practice Ontario	• Digital tools for HF, COPD and diabetes	• Initiative to make Ontario Health quality standards available for use in widely used EMRs
HeartLife Foundation	• HF policy framework	• Description of a framework used by some organizations in Ontario
PHM Coalition	• Report on digital tools to support PHM	• Listing of digital tools available to support PHM

RISE welcomes feedback on this peer profile, as well as additional resources to share, and will update it as new resources come online. Please send feedback and resources to rise@mcmaster.ca.

Lavis JN, Moat KA, Reid R, Hindmarsh M, McGeoch L, Wood B. RISE brief 35: Implementing integrated clinical pathways using a population-health management approach. Hamilton: McMaster Health Forum, 2025.

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 and Ontario Health. No endorsement by the ministry or Ontario Health is intended or should be inferred

ISSN: 2562-7309 (online)

This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International license.