# Rapid Synthesis

## Creating Rapid-learning Health Systems in Canada

## Appendix C3: Elderly population

10 December 2018

McMaster University | McMaster HEALTH FORUM

EVIDENCE >> INSIGHT >> ACTION

# Rapid Synthesis:
# Creating Rapid-learning Health Systems in Canada
# Appendix C3: Elderly population
# 90-day response

Lavis JN, Gauvin F-P, Mattison CA, Moat KA, Waddell K, Wilson MG, Reid R. Appendix C3: Elderly population: Creating rapid-learning health systems in Canada. Hamilton, Canada: McMaster Health Forum, 10 December 2018.

## Table 1: Assets and gaps related to the elderly population at the federal, national and/or pan-Canadian level

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • None identified | • Health TAPESTRY supports goal setting and achievement in select communities in Ontario and (with the support of local partners) in select other Canadian provinces |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • None identified | • Canadian Longitudinal Study on Aging collects and shares data on a large cohort of older Canadians to improve our understanding of why some people age in a healthy way while others do not<br>• interRAI develops measurement instruments to support the collection of data about the characteristics and outcomes of persons served in many health- and social-services settings serving older adults (e.g., most long-term care homes)<br>• Canadian Primary Care Sentinel Surveillance Network is testing the use of a frailty index in 1,200 sentinel primary-care practices across Canada |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • Networks of Centres of Excellence (NCE) program funds two NCEs focused on aging<br>o AGE-WELL, which focuses on technologies that can optimize the well-being of older adults<br>o Canadian Frailty Network, which focuses on improving care for frail older adults<br>• Federal and New Brunswick governments have agreed to support applied research initiatives to improve the aging experience for seniors, and the federal government has committed to three years of funding to support this shared priority (starting in 2018)<br>• Canadian Consortium on Neurodegeneration in Aging supports collaboration among dementia researchers<br>• Baycrest's Centre for Aging and Brain Health Innovation supports the development, testing and dissemination of new technologies in 'aging and brain' health<br>• Translating Research in Elder Care conducts research focused on improving the quality of life of residents in long-term care homes and the quality of work-life for their caregivers |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • None identified | • McMaster Optimal Aging Portal provides patient-targeted, evidence-based resources to support self-management and shared decision-making |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans | • Government of Canada has a National Seniors Council that provides advice on seniors' health and well-being, five national organizations have called for a national seniors strategy, and many | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| and how the systems are organized and aligned to support rapid learning and improvement at all levels | 3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | provinces and territories have developed seniors strategies or action plans<br>• Government of Canada has a ministerial advisory board on dementia and is developing a national dementia strategy | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • Canadian Foundation for Healthcare Improvement has supported two learning collaboratives targeting older adults, with one focused on elder-friendly acute models of care and another focused on reducing antipsychotic medication use in long-term care homes | • National Initiative for the Care of the Elderly (NICE) aims to help close the gap between research evidence and practice for older adults |

## Table 2: Assets and gaps related to the elderly population British Columbia

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • The Office of the Seniors Advocate tracks concerns from seniors, quality indicators related to seniors care (e.g., hospitalization rates) and other indicators (e.g., volume and types of home and community care provided) on a yearly basis to inform future work<br>• The Office of the Seniors Advocate is also guided by a diverse council of 30 seniors from B.C., who have the role of providing advice and feedback about seniors-related issues in the province to the office<br>• The Advanced Care Planning Initiative from the BC Centre for Palliative Care was co-designed with key stakeholders across the province, including representatives from all regional health authorities, the Ministry of Health, healthcare professionals, provincial and local community and professional organizations, and the public<br>• Gaps may include few coordinated programmatic efforts to engage patients and their families in their own health, their own care and in research, as well as capacity building | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for | • Survey BC Seniors (a project of the British Columbia Office of the Seniors Advocate) conducts surveys with seniors and their families to get feedback about the quality of residential care and accommodations, and uses and reports on data from the MOH (at the system level) and health authorities (for regional level indicators)<br>• One potential gap is that there is a significant amount of data available, but it is not being used | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research-ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • Seniors BC, HealthLinkBC and Healthy Families BC provide a number of patient-targeted evidence-based resources, decision aids and goal-setting supports for seniors' health, including for advanced care planning, Alzheimer's disease and dementia, cataract surgery, disease screening, elder abuse, emergency preparedness, flu, healthy eating, hearing loss, heart disease, high blood pressure, osteoporosis, Parkinson's disease, falls prevention, and stroke<br>• The Office of the Seniors Advocate provides decision supports primarily through care pathways in the form of information and referrals for those navigating seniors' services<br>• The BC Seniors' Guide is one form of a description of how the system works, as it provides a compilation of information and resources focused on supporting healthy aging, which includes planning for healthy aging, health and safety, housing, home and community care, transportation and financial and legal matters<br>• The Advanced Care Planning Initiative from the BC Centre for Palliative Care is an example of decision supports for a particular form of care for older adults, | • BC Guidelines has produced a practice guideline on early identification and management of frailty in older adults. |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | | which has focused on empowering communities to promote advanced care planning (e.g., through a training curriculum, a toolkit for community volunteers and organizations to facilitate and host Advance Care Planning sessions for the public, and advanced care planning tools)<br>• One potential gap is that while the BC Seniors' Guide provides information and resources about the system, it has not been produced in a way that the public is embracing | |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | • The Office of the Seniors Advocate is mandated to report to the Minister of Health each year about the activities of the office and on issues that have been identified through its work<br>• The Office of the Seniors Advocate also has a mechanism to jointly set rapid learning and improvement priorities through its seniors' council | • None identified |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • The Office of the Seniors Advocate can draw on several mechanisms (outlined in this table) as part of its mandate to monitor and analyze seniors' services and issues in B.C., and to make recommendations to government and service providers to address systemic issues<br>• The BC Palliative Care Initiative activities appear to use mechanisms to support a culture of rapid learning and improvement such as the array of | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | | community- and stakeholder-engagement processes for developing and implementing its goals, providing "seed grants" to support community organizations to implement projects that are potentially sustainable and scalable, building a network of "master trainers," and conducting policy reviews and identifying gaps for improvement | |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • The Office of the Seniors Advocate has responsibility for monitoring and analyzing services and issues for seniors in B.C. in five areas (healthcare, housing, income supports, personal supports and transportation) and uses that information to provide recommendations to government and service providers about addressing system-level issues<br>• The BC Centre for Palliative Care may also contribute to competencies for rapid learning and improvement (e.g., through the network of master trainers and centralized support for reviewing policies), by identifying gaps and identifying quality indicators to measure progress | • None identified |

## Table 3: Assets and gaps related to the elderly population in Alberta

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; , government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • AHS supports a provincial advisory council for 'seniors and continuing care' that includes patients and family members<br>• AHS's strategic clinical network on seniors health supports a 'core committee' that includes patients and family members<br>• AHS's provincial 'seniors health' program supports the Continuing Care Quality Council and its working groups, each of which includes patients and family members<br>• AHS's provincial 'seniors health' program supports patient goal setting as part of its advance care planning work | • AHS's strategic clinical network on seniors health will soon release a list of research priorities in seniors health that was prepared using a James Lind Alliance approach (and a list of research priorities specific to dementia is now being prepared) |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • Health Quality Council of Alberta conducts client and family 'satisfaction and experience' surveys in all continuing-care sectors<br>• Path to Care program measures a variety of types of wait times and shares the data widely<br>• Continuing Care Quality program measures quality in all long-term care homes and shares site-specific data with residents, families and staff (and these data will soon be available alongside all other long-term care data through a single website) | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • AHS's provincial 'seniors health' program and its strategic clinical network addressing seniors health work with AHS knowledge-management staff to synthesize data and evidence about clinical problems and options for improvement | • Translating Research in Elder Care (TREC) undertakes research about front-line care provision in long-term care homes<br>• AHS's provincial 'seniors health' program and its strategic clinical network addressing seniors work with many provincial research groups (e.g., those supporting Alberta's dementia research framework) and national research groups (e.g., Canadian Frailty Network) |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • AHS's provincial 'seniors health' program and its strategic clinical network addressing seniors health provide care pathways and other decision supports for palliative care and for medical assistance in dying<br>• AHS's provincial 'seniors health' program supports the preparation of 'clinical knowledge topics' and their incorporation into clinical information systems<br>• AHS's provincial 'seniors health' program is working with Alberta Health's Health Evidence and Policy Unit and others to conduct a health technology assessment to inform community-based models of palliative care | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model | • AHS delivers most of the home and community care, specialty care, rehabilitation care and long-term care accessible to seniors and, through 'Enhancing Care in the Community,' is investing in home and community-care infrastructure (to improve health promotion and disease prevention, intervene in community settings to avoid hospitalizations, and support continued living in the community)<br>• AHS's provincial 'seniors health' program and its strategic clinical | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | network addressing seniors health have a shared medical leader<br>• AHS's provincial 'seniors health' program has a mandate for standardization across the zones (e.g., home-care services and transitions into continuing care and across zones) and directs both operational connections to the zones and policy connections with a dedicated branch in Alberta Health (in ways that a strategic clinical network alone doesn't typically have) | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • AHS's provincial 'seniors health' program supported the development and implementation of an integrated cross-sector approach to medical assistance in dying, which is a model for other cross-sector initiatives | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • A strategic clinical network supports improvement for seniors<br>• AHS's provincial 'seniors health' program successfully scaled up medical assistance in dying, among other approaches to care<br>• Gaps may include the limited number of staff to support the work of the provincial program and strategic clinical network | • None identified |

## Table 4: Assets and gaps related to the elderly population in Saskatchewan

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • Connected Care focuses on patient flow and is moving towards team-based care for older adults to support community-based care and either prevent or reduce admissions to hospital and long-term care | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • Connected Care Strategy is part of the 2018-2019 Health System Plan and uses computer modelling to test possible interventions to improve patient flow and transitions from hospital to community care | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • None identified | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 5: Assets and gaps related to the elderly population in Manitoba

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • VPriority Home is an initiative that provides home-care supports for high-needs older adults to prevent institutionalization<br>• Seniors Community Resource Councils provide programs for older adults in the community<br>• The Active Living Coalition of Older Adults for Manitoba supports well-bring for older adults | • The Centre on Aging at the University of Manitoba conducts research on aging<br>o Annual Research Symposium promotes dialogue between researchers and citizens<br>• Manitoba Follow-up Study is the largest and longest (71 years) Canadian research on cardiovascular disease<br>• Research from the University of Manitoba on developing a conceptual framework for community-based restorative care |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • None identified | • The Aging in Manitoba (AIM) Longitudinal Study is the longest continuous study of aging in Canada, with data located at the Centre on Aging at the University of Manitoba |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • Preventfalls.ca by the Winnipeg Regional Health Authority to reduce the risk of falling | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 6: Assets and gaps related to the elderly population in Ontario

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • None identified | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for | • MyPractice reports enable physicians working in long-term care homes to confidentially see their prescribing patterns (including antipsychotics and benzodiazepines) in relation to peers across the province, and presents data on resident characteristics (e.g. aggressive behaviour scale, clinical indications, and percentage of new residents)<br>• HQO provide various performance measures on long-term care and home care | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | • Gaps may include that MyPractice reports are only sent to those who subscribe to them, and the reports don't yet provide comparators that reflect comparable patient populations or focus on indicators that have been prioritized by patients and providers | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • Labarge Optimal Aging Opportunities Fund provides seed funding to support innovative and interdisciplinary projects that aim to improve the lives of Canada's older adults<br>• Schlegel-UW Research Institute for Aging conducts research to enhance care and improve quality of life for older adults |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • Government of Ontario hosts a portal providing information about programs and services available to help Ontarians aged 65 and over to lead a healthy, active and engaged life<br>• Choosing Wisely Ontario (a collaboration between Health Quality Ontario, Choosing Wisely Canada, and the Ontario College of Family Physicians) has a campaign in the long-term care sector focusing on appropriate prescribing with respect to antipsychotic use, diabetes care, and asymptomatic bacteriuria<br>• HQO's Experiencing Integrated Care examines key touchpoints where patients 55 years and older are in transition from one healthcare provider to another, and where care coordination and communication is needed | • McMaster Optimal Aging Portal provides patient-targeted, evidence-based resources to support self-management and shared decision-making<br>• Health TAPESTRY supports goal setting and achievement among older adults in select communities<br>• Ontario Pharmacy Evidence Network (OPEN) produces and supports the implementation of guidelines, often with a focus on older adults (e.g., deprescribing guidelines for the elderly) |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation | • Councils on Aging Network of Ontario (CANO) is a network of organizations taking leadership in education, advocacy, research and planning that enhance the quality of life of older adults in their communities | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| organized and aligned to support rapid learning and improvement at all levels | 4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | • Ontario Interdisciplinary Council for Aging & Health seeks to enhance the well-being of older adults by promoting partnerships and collaboration among universities and stakeholders to improve interdisciplinary and interprofessional education, research, policy, and practice related to aging<br>• Ontario Ministry for Seniors and Accessibility develops and delivers public services to older adults to improve their quality of life so they can be safe, engaged, active and healthy | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | | |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • Ministry launched a new performance tool to increase transparency in long-term care for families | • Seniors Health Knowledge Network shares evidence-based care practices within all seniors' healthcare venues (particularly among long-term and community care staff) and informs policy development for service providers and care settings |

## Table 7: Assets and gaps related to the elderly population in Quebec

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • Resident committees in long-term care facilities have the mandate to promote quality improvement in order to improve the living conditions of residents, to evaluate residents' satisfaction, inform them about their rights and obligations, as well as to defend their collective rights and interests.<br>• 18 tables de concertation des aînés bring together representatives of seniors and key stakeholders in their region concerned with the living conditions of seniors<br>• PRISMA (a model of integrated service delivery for frail older people) emphasized the need to measure the satisfaction in regard to the services received, client empowerment and caregivers' burden (among other measures)<br>• Gaps may include a lack of efforts to institutionalize the PRISMA model, and the lack of engagement of community organizations (and lack of recognition of their contributions) | • Centre AvantÂge (hosted by the Institut universitaire de gériatrie de Montréal) disseminates to the general public the most recent research evidence through conferences, training and workshops |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | • Système d'information clientèle en centre d'hébergement et de soins de longue durée (SICHELD) supports the provision of services to clients or users transitioning between the different missions of institutions in the health and social services network<br>• MSSS has several indicators to assess its programs supporting the autonomy of seniors<br>• No system in private nursing homes and assisted living facilities to capture, link and timely share relevant data<br>• ICLSC (Système d'information sur la clientèle et les services) provides data on requests for services, users and interventions (including services to support the autonomy of older adults) | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | | • Gaps may include the lack of culture (and political will) among some health-system leaders to systematically use data to improve the quality of care (e.g., no changes being made to home-care supports despite the PRIMSA initiative, and the determination of the functional autonomy profiles indicating that we do not provide home-care supports to those most in need); the lack of user friendly formats to present reflexive data; and the Secrétariat du Québec aux relations canadiennes which may constitute an obstacle to sharing relevant data with other Canadian jurisdictions | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • Fonds de recherche du Québec – Santé (FRQS) identified aging as a priority research area<br>• INSPQ leads ongoing knowledge translation activities related to aging, including KT activities for CISSS or CIUSSS and other partners on the social isolation of seniors, a scientific watch on some components of healthy aging (physical activity, healthy eating, social participation and others), and provides support to the MSSS, CISSS or CIUSSS and other partners on healthy aging interventions<br>• Réseau québécois de recherche sur le vieillissement supports interdisciplinary research on aging, promotes the development of research capacity, and fosters the creation of research partnerships on aging |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards | • Multiclientele Assessment Tool introduced by the MSSS is an integrated tool to assess the needs of people with loss of autonomy and to identify the services they need (especially in institutions or at home) | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | | |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | • Secrétariat aux aînés offers a horizontal vision of seniors' issues and develops strategies and actions that promote optimal aging (hosted by the ministère de la Famille).<br>• Ministère de la Famille supports the social, economic and professional contribution of seniors (with a focus on the social aspects of aging), and has three subcommittees (subcommittee of non-governmental partners working with seniors; subcommittee of senior representatives; and subcommittee of stakeholders conducting research and offering practical support to seniors)<br>• Plan d'action 2018-2023 - Un Québec pour tous les âges (the first government policy on aging) may provide greater alignment | • Quebec's Chief Scientists identified demographic changes and aging as key research priorities, which may help to foster greater alignment and inter-sectoral approaches |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • Réseau sur le vieillissement et les changements démographiques was established by the MSSS as a knowledge translation mechanism on aging-related issues and demographic changes for researchers, professionals and educators | • None identified |

## Table 8: Assets and gaps related to the elderly population New Brunswick

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • None identified | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • Healthy Seniors Pilot Project (coordinated by the New Brunswick Aging Secretariat) is accepting proposals to provide information and programs that could help improve the aging experience for seniors in New Brunswick and elsewhere in Canada | • Horizon Health Network supports research in geriatrics<br>• New Brunswick Innovation Fund identified aging as a priority area |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • None identified | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations | • Council on Aging established to guide the development of an aging strategy to address both short-term (one-to-three years) sustainability and long-term (10 or more years) transformational change<br>• Ministry of Social Development (and its Nursing Home Services branch) is responsible for the planning, design, monitoring and inspection of the services provided to residents in nursing homes<br>• Gaps may include the challenges of maintaining interdepartmental coordination on aging-related issues (e.g., the Ministry of Social Development may have different priorities than the Ministry of Health) | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • New Brunswick Collaborative for Healthy Aging and Care is a growing coalition representing 33+ stakeholder organizations to shape aging in N.B. communities by developing unique partnerships to build system capacity, have an impact on culture and affect needed policy change | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 9: Assets and gaps related to the elderly population in Nova Scotia

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>**3)** Build patient/citizen capacity to engage in all of the above | • Connect.ca is an online guide for individuals and communities across Nova Scotia, with older adults in mind, that aims to engage older adults in health promotion and disease prevention by providing an inventory of all recreational programs across the province<br>• Seniors Advisory Council of Nova Scotia is made up of nine different organizations that represent 120,000 seniors<br>• Consultations are undertaken by the Nova Scotia Department of Seniors on priority issues, to ensure that their views are considered in the development of policies, programs and services | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | • None identified | • Maritime Data Centre for Aging Research and Policy Analysis supports the collection of data on the health workforce dedicated to older adults, the access and use of services by older adults, and uses this information to predict future home-care needs<br>o The centre trains graduate and undergraduate students in the analysis of public policies and quantitative analysis related to aging to support the translation of findings to local and provincial decision-makers for continuing care for older adults |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>**6)** Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • Nova Scotia Centre on Aging hosted by Mount Saint Vincent University which conducts applied research on age-related issues<br>o The centre is affiliated with the Department of Family Studies and Gerontology which works in partner with the academic community, government, seniors and the private sector |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • The Positive Aging Directory is an annually updated comprehensive information directory produced by the Department of Seniors to give Nova Scotians easy information about the programs and services for older adults<br>• Clinical practice guidelines for care of older adults are developed and disseminated by professional colleges<br>• Group of IX Senior's Advisory Council provides information to government to support system decisions related to aging; members of the Group of IX Council must be affiliated with national bodies that meet with the Government of Canada through the Congress of National Senior's Organizations<br>• Data from Inter-RAI home care assessments are collected and currently being used to construct client pathways | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>**9)** Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | • Increase the geriatric office visit fee to $44.54, recognizing the time and effort involved in ensuring comprehensive and continuous care for the senior population<br>• Expert advisory panel has been appointed to recommend improvements in quality of long-term care in Nova Scotia<br>• Caregiver Benefit Program supports older adults to remain at home by providing a $400 a month stipend to qualifying caregivers for those with high levels of disability or impairment<br>• Development of Action Plan for an Aging Population brings together funding and efforts from across government departments and both the health and social service sectors | • Age-Friendly Communities grant program supports the development of pilot research projects that focus on ensuring older adults are getting resources and supports to improve their lives |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | • Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • History of working in partnership and maintaining strong relationships across departments to address aging-related issues such as the development of the province's Dementia Strategy, housing and financial supports, as well as other integrated health and social services<br>• Nova Scotia Department of Seniors hosted capacity-building workshops across departments to determine how they can effectively integrate efforts, strengthen partnerships and take a shared leadership approach to aging issues | • NS GovLab is a provincial social innovation lab in the process of being developed to test prototypes and policies to support the aging population and to create connections among researchers and decision-makers within the space, that will include:<br>o capacity building amongst NS GovLab fellows on systems and design-thinking<br>o CoCreation Team to design, facilitate and evaluate the lab's activities<br>o self-directed community of practice among NS GovLab fellows |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • Department of Seniors is responsible for publishing an accountability report each year which reports on the progress of any ongoing projects as well as evaluations of existing programs and services | • None identified |

## Table 10: Assets and gaps related to the elderly population in Prince Edward Island

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • PEI Senior Citizen's Federation is a province-wide not-for profit organization consisting of over 50 seniors' clubs, groups and organizations that consult with government about seniors' concerns<br>• Prince Edward Island Seniors Guide provides information about programs and services for seniors living in P.E.I.<br>• Living a Healthy Life Program assists older adults to address daily challenges of chronic conditions | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • Quality standards have been set for residential care facilities and the care and services provided in them<br>• Senior's Secretariat provides policy and program advice to government and is comprised of representatives from provincial level organizations with an interest in seniors' issues | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities | • Promoting Wellness, Preserving Health Action Plan, was a cross-departmental effort to develop a unifying vision for an age-friendly health and social system and provides the framework for ongoing reforms<br>• Creation of one government portfolio for seniors to co-locate all functions and systems related to seniors<br>• Annual licensing requirement for supportive residential care setting<br>• Accreditation requirement for public manors and licensing of private nursing homes. | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 11: Assets and gaps related to the elderly population in Newfoundland and Labrador

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • Public-awareness campaigns been developed and co-produced with older adults to support heightened levels of respect for older persons to ensure greater social inclusion<br>• Provincial advisory council on aging and seniors brings different perspectives including citizens' and patients' together to advise the government on issues related to aging and seniors<br>• Development of Adult Protection Act and violence-protection initiative included representation from Indigenous seniors on the steering committee<br>• Public-engagement activities are also run by the Seniors' Advocate and aim to bring seniors together to discuss systemic issues and explore solutions to bring about change | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for | • The Senior's Profile on the Community Accounts webpage provides data about those 55 years of age and older living in the province | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • Health Research Exchange focused on aging, which exchanges knowledge, reviews research in progress, finds funding opportunities, and collaborates on research projects related to aging and seniors<br>• Forum provided by the Health Research Exchange where students, researchers, policymakers and the general public can meet to discuss issues related to healthy aging in Newfoundland and Labrador<br>• Healthy Aging Research Program developed to support research in the area of aging and seniors |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • Caregivers Out of Isolation NL is a program developed to support caregivers of all ages who care for family members and friends of any age through an information line, newsletter and caregiving guide | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations | • Office of the Senior's Advocate is an independent office to identify, review and analyze systemic issues related to seniors<br>• Development of Access. Inclusion. Equality. A strategy for the inclusion of persons with disabilities, including frail adults and disabled elderly, which is aligned with the United Nations Convention on the Rights of Persons with Disabilities and provides a framework for a sustainable approach to achieving a fully inclusive province<br>• Universal design approaches have been implemented to increase accessibility and inclusion throughout society | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | • Significant financial investment in Close to Home: A Strategy for Lon-Term Care and Community Support Services to support the transformation of long-term care in Newfoundland and Labrador | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 12: Assets and gaps related to the elderly population in the Yukon

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • A Summit on Aging in Yukon is conducting extensive public consultations to define "aging in place," how to support aging well in the territory, as well as to build public knowledge about existing services and supports in the territory for older adults, which will complement group interviews, individual interviews and engagement with each of the First Nations communities across the territory<br>• The Yukon Council on Aging is a volunteer organization with a focus on supporting optimal aging and to age in place for as long as possible<br>• The Yukon Council on Aging also provides the Learning for Life Program, which includes learning events on a variety of topics including aging well at home and health and aging<br>• Resident and family councils are convened for long-term care facilities<br>• The home-care program frequently engages people with lived experience to guide delivery of care and policy | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • None identified | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works | • The palliative care framework outlines patient decision supports and care pathways for individual and community engagement in supporting high-quality end-of-life care, but a caveat to this framework is that "[a]t present, the Yukon government does not have a data program that integrates data sources from all care service providers throughout Yukon. By not having such a mechanism in place, it is difficult for the government to report the type of or number of services provided to dying people, or to describe the number of people who died in each location." | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations | • Significant investments have been made in long-term care and continuing care, including a new centre for re-ablement and reassessment designed to coordinate efforts to get alternate level of care patients prepared to leave hospital | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 8) Mechanisms to jointly set rapid learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • The Summit on Aging in Yukon is a key component of creating a rapid-learning culture given the extensive public engagement and commitment to the process across the territory<br>• The Yukon Council on Aging includes in its mandate a focus on collaborating "…with other groups on issues relevant to seniors such as pensions, housing, quality health care, aging in place and access to recreational, social, educational and spiritual resources," and to "encourage cooperation and information sharing between seniors' groups and provide information on resources available for senior citizens" | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • None identified | • None identified |

## Table 13: Assets and gaps related to the elderly population in the Northwest Territories

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • None identified | • None identified |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider- | • InterRAI tool now being rolled out across the territory to capture data related to older adults in long-term care | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| costs) and outcome indicators (e.g., health status) | friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • The Northwest Territories 'Continuing Care Review' and more recent review of long-term care illustrates capacity for producing and sharing evaluations related to aging | • None identified |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works… | • None identified | • None identified |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites | • None identified | • None identified |

| Characteristic | Examples | Health-system receptors and supports | Research-system supports |
|---|---|---|---|
| | 7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities<br>9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • None identified | • None identified |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • The Northwest Territories 'Continuing Care Review' and review of long-term care illustrates competencies and emphasis placed on reporting related to rapid learning and improvement in the territory | • None identified |

**Table 14: Assets and gaps related to the elderly population in Nunavut**

| Characteristic | Examples | Health-system receptors and supports | Research system supports |
|---|---|---|---|
| **Engaged patients:** Systems are anchored on patient needs, perspectives and aspirations (at all levels) and focused on improving their care experiences and health at manageable per capita costs and with positive provider experiences | 1) Set and regularly adjust patient-relevant targets for rapid learning and improvement (e.g., improvements to a particular type of patient experience or in a particular health outcome)<br>2) Engage patients, families and citizens in:<br>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)<br>b) their own care (e.g., shared decision-making; use of patient decision aids)<br>c) the organizations that deliver care (e.g., patient-experience surveys; co-design of programs and services; membership of quality-improvement committees and advisory councils)<br>d) the organizations that oversee the professionals and other organizations in the system (e.g., professional regulatory bodies; quality-improvement bodies; ombudsman; and complaint processes)<br>e) policymaking (e.g., committees making decisions about which services and drugs are covered; government advisory councils that set direction for (parts of) the system; patient storytelling to kick off key meetings; citizen panels to elicit citizen values)<br>f) research (e.g., engaging patients as research partners; eliciting patients' input on research priorities)<br>3) Build patient/citizen capacity to engage in all of the above | • Culture of engaging and consulting elders in decision-making about a number or issues through elder programs, which serves as a strong platform for expanding this engagement into health-system decisions<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |
| **Digital capture, linkage and timely sharing of relevant data**: Systems capture, link and share (with individuals at all levels) data (from real-life, not ideal conditions) about patient experiences (with services, transitions and longitudinally) and provider engagement alongside data about other process indicators (e.g., clinical encounters and costs) and outcome indicators (e.g., health status) | 1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)<br>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs<br>3) Capacity to capture longitudinal data across time and settings<br>4) Capacity to link data about health, healthcare, social care, and the social determinants of health<br>5) Capacity to analyze data (e.g., staff and resources)<br>6) Capacity to share 'local' data (alone and against relevant comparators) – in both patient- and provider-friendly formats and in a timely way – at the point of care, for providers and practices (e.g., audit and feedback), and | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |

| Characteristic | Examples | Health-system receptors and supports | Research system supports |
|---|---|---|---|
| | through a centralized platform (to support patient decision-making and provider, organization and system-wide rapid learning and improvement) | | |
| **Timely production of research evidence**: Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations | 1) Distributed capacity to produce and share research (including evaluations) in a timely way<br>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations<br>3) Capacity to synthesize research evidence in a timely way<br>4) One-stop shops for local evaluations and pre-appraised syntheses<br>5) Capacity to access, adapt and apply research evidence<br>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |
| **Appropriate decision supports**: Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks | 1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as<br>a) patient-targeted evidence-based resources<br>b) patient decision aids<br>c) patient goal-setting supports<br>d) clinical practice guidelines<br>e) clinical decision support systems (including those embedded in electronic health records)<br>f) quality standards<br>g) care pathways<br>h) health technology assessments<br>i) descriptions of how the health system works… | • Nunavut Seniors' Information Handbook provides older adults with an overview of how the health and social system works, as well as the full range of programs and services available to support them<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |
| **Aligned governance, financial and delivery arrangements**: Systems adjust who can make what decisions (e.g., about joint learning priorities), how money flows and how the systems are organized and aligned to support rapid learning and improvement at all levels | 1) Centralized coordination of efforts to adapt a rapid-learning health system approach, incrementally join up assets and fill gaps, and periodically update the status of assets and gaps<br>2) Mandates for preparing, sharing and reporting on quality-improvement plans<br>3) Mandates for accreditation<br>4) Funding and remuneration models that have the potential to incentivize rapid learning and improvement (e.g., focused on patient-reported outcome measures, some bundled-care funding models)<br>5) Value-based innovation-procurement model<br>6) Funding and active support to spread effective practices across sites<br>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations<br>8) Mechanisms to jointly set rapid-learning and improvement priorities | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |

| Characteristic | Examples | Health-system receptors and supports | Research system supports |
|---|---|---|---|
| | 9) Mechanisms to identify and share the 'reproducible building blocks' of a rapid-learning health system | | |
| **Culture of rapid learning and improvement**: Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability | 1) Explicit mechanisms to develop a culture of teamwork, collaboration and adaptability in all operations, to develop and maintain trusted relationships with the full range of partners needed to support rapid learning and improvement, and to acknowledge, learn from and move on from 'failure' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |
| **Competencies for rapid learning and improvement**: Systems are rapidly improved by teams at all levels who have the competencies needed to identify and characterize problems, design data- and evidence-informed approaches (and learn from other comparable programs, organizations, regions, and sub-regional communities about proven approaches), implement these approaches, monitor their implementation, evaluate their impact, make further adjustments as needed, sustain proven approaches locally, and support their spread widely | 1) Public reporting on rapid learning and improvement<br>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)<br>3) In-house capacity for supporting rapid learning and improvement<br>4) Centralized specialized expertise in supporting rapid learning and improvement<br>5) Rapid-learning infrastructure (e.g., learning collaboratives) | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' | • Few assets identified related directly to aging<br>• Gaps may include similar areas as those identified in the table about the' health system as a whole' |

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