

# Rapid Synthesis

Creating Rapid-learning Health Systems  
in Canada

Appendix B8: New Brunswick

10 December 2018



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**Rapid Synthesis:  
Creating Rapid-learning Health Systems in Canada  
Appendix B8: New Brunswick  
90-day response**

Lavis JN, Gauvin F-P, Mattison CA, Moat KA, Waddell K, Wilson MG, Reid R. Appendix B8: New Brunswick. In Rapid synthesis: Creating rapid-learning health systems in Canada. Hamilton, Canada: McMaster Health Forum, 10 December 2018.

**Table 1: Assets and gaps at the level of New Brunswick’s health system**

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Engaged patients:</b> 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</p>	<ol style="list-style-type: none"> <li>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)</li> <li>2) Engage patients, families and citizens in:                             <ol style="list-style-type: none"> <li>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)</li> <li>b) their own care (e.g., shared decision-making; use of patient decision aids)</li> <li>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)</li> <li>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)</li> <li>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)</li> <li>f) research (e.g., engaging patients as research partners; eliciting patients’ input on research priorities)</li> </ol> </li> <li>3) Build patient/citizen capacity to engage in all of the above</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick’s Ombudsman</a> provides patients the opportunity to register a complaint if they feel they have been treated unfairly by a provincial body</li> <li>• <a href="#">Psychiatric Patient Advocate Services</a> specifically defends the rights of mental health patients</li> <li>• <a href="#">New Brunswick Health Council</a> has the mandate of engaging citizens and reporting on health system performance</li> <li>• <a href="#">Horizon Health Network</a> has a Patient Representative Services providing information, support, encouragement and assistance to patients, families and staff in all our facilities during a patient's care experience</li> <li>• <a href="#">Horizon Health Network</a> is transforming itself into a patient and family-centred care organization where healthcare staff, patients and families work together to meet the individual healthcare needs of patients</li> <li>• <a href="#">Horizon Patient and Family Advisory Council</a> aims to create a partnership to provide advice and guidance to improve patient- and family-centred care experiences and the culture of care throughout Horizon Health Network</li> <li>• <a href="#">Horizon Health Network</a> integrates Patient/Family Advisors across the health network in key committees and program groups</li> <li>• <a href="#">Vitalité Health Network</a> is engaging patient-experience partners with managers and staff to help create a patient- and family-centred care environment</li> <li>• <a href="#">Vitalité Health Network</a> is conducting inpatient and outpatient satisfaction surveys</li> <li>• Strategic clinical units and networks engage patients and community members to identify priorities and in their working groups</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Maritime SPOR SUPPORT Unit</a> engages volunteers as patient advisors for research into priority health-system issues (e.g., unnecessarily long hospital stays), and provides support for researchers looking to engage patients by connecting them with patients, providing resources and tools for patient engagement, and providing training in patient engagement</li> <li>• <a href="#">A Cure is on the Horizon</a>, a new online research registry launched by Horizon Health Network in collaboration with the Maritime SPOR SUPPORT Unit, provides an opportunity for patients interested in research to provide their contact information as well as the areas of research that are of interest to them - whether it is to participate in a clinical trial or collaborate with a research team to develop and conduct a new study</li> </ul>
<p><b>Digital capture, linkage and timely sharing of relevant data:</b> Systems</p>	<ol style="list-style-type: none"> <li>1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Health Council</a> has systems in place to capture, link and share data, including:                             <ul style="list-style-type: none"> <li>○ Primary Health Surveys;</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Institute for Research, Data and Training</a> (NB-IRDT) offers administrative data</li> </ul>

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Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p>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)</p>	<ol style="list-style-type: none"> <li>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs</li> <li>3) Capacity to capture longitudinal data across time and settings</li> <li>4) Capacity to link data about health, healthcare, social care, and the social determinants of health</li> <li>5) Capacity to analyze data (e.g., staff and resources)</li> <li>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)</li> </ol>	<ul style="list-style-type: none"> <li>○ 33 community profiles empower individuals with information about their region to stimulate interest in building healthier communities; and</li> <li>○ Hospital Patient Care Experience</li> <li>● <u>New Brunswick Health System Report Card</u> measures the quality of health services delivered in the province (including report cards focused on home care in 2018, acute-care survey in 2019, primary care in 2020)</li> <li>● <u>New partnership</u> in 2018 between the provincial government and the New Brunswick Medical Society to support and accelerate the adoption of the Provincial Electronic Medical Record system by doctors</li> <li>● <u>Community Health Needs Assessments</u> (CHNA) produced in collaboration between Horizon Health Network, Vitalité Health Network, New Brunswick Health Council and community members (process being standardized in collaboration with the Department of Health)</li> <li>● <u>Unités et réseaux cliniques apprenants</u> ('clinical learning units and networks') proposed by Vitalité Health Network and Horizon Health Network to support the optimization and continuous improvement of health services through the sharing and systematic analysis of relevant data throughout the patient's care path (units will be implemented at the regional level and networks will be implemented at the provincial level)</li> <li>● Gaps may include the lack of tools and systems to collect/analyze/share data about the needs/priorities of the population, particularly to assess the determinants of health, the quality of care, and the workforce; lack of consensus about key indicators; the lack of emphasis on self-reported indicators; the lack of interoperability across existing systems; and Community Health Needs Assessments were mostly based on the views of community members and not much on data (difficult for</li> </ul>	<p>access services for qualified researchers through the Maritime SPOR SUPPORT Unit, which is linking clinical data to secure, anonymized administrative data (such as Vital Statistics or Canadian Institute for Health Information's Hospital Discharge Abstracts)</p>

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Timely production of research evidence:</b> Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations</p>	<ol style="list-style-type: none"> <li>1) Distributed capacity to produce and share research (including evaluations) in a timely way</li> <li>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations</li> <li>3) Capacity to synthesize research evidence in a timely way</li> <li>4) One-stop shops for local evaluations and pre-appraised syntheses</li> <li>5) Capacity to access, adapt and apply research evidence</li> <li>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers</li> </ol>	<p>community members to distinguish needs and wants)</p> <ul style="list-style-type: none"> <li>• Research-ethics boards at Horizon Health Network and Vitalité Health Network</li> <li>• Infrastructures to build research capacity with Horizon’s Research Services Team and Vitalité’s Research Support Office (e.g., support new and experienced investigators conducting research; develop research protocols and provide statistical analysis; assist with research-ethics board submissions; negotiate clinical trial and confidentiality agreements; support the management of research funds; help identify sources of research funding; provide customized education and training opportunities; and provide support to clinician-researchers)</li> <li>• <a href="#">Support Opportunities and Assistance for Research</a> (SOAR) program at Horizon aims to improve patient care through research that will produce the highest level of evidence for development and testing of care guidelines; accurate and timely diagnoses; and best treatment options and rapid recovery</li> <li>• Gaps may include the limited capacity of the province and regions to steer a research agenda that meets the population needs (but greater efforts and capacity to structure clinical research at the regional level)</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Health Research Foundation</a> has a mandate to coordinate, support and promote health research in the province</li> <li>• The province is developing its research capacities and infrastructures (e.g., <a href="#">Atlantic Cancer Research Institute</a>)</li> </ul>
<p><b>Appropriate decision supports:</b> Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks</p>	<ol style="list-style-type: none"> <li>1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as             <ol style="list-style-type: none"> <li>a) patient-targeted evidence-based resources</li> <li>b) patient decision aids</li> <li>c) patient goal-setting supports</li> <li>d) clinical practice guidelines</li> <li>e) clinical decision support systems (including those embedded in electronic health records)</li> <li>f) quality standards</li> <li>g) care pathways</li> <li>h) health technology assessments</li> <li>i) descriptions of how the health system works</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Health Council</a> offers useful data and information to support decisions at the regional and provincial level</li> <li>• <a href="#">Canadian Agency for Drugs and Technologies in Health</a>’s rapid-response service sometimes used by managers and policymakers in New Brunswick</li> <li>• Gaps may include the lack of tools to support decisions at the clinical level</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">VMaritime SPOR SUPPORT Unit</a> runs a weekly Lunch &amp; Learn series focused on using information to support research and decision-making</li> </ul>

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Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Aligned governance, financial and delivery arrangements:</b> 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</p>	<ol style="list-style-type: none"> <li>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</li> <li>2) Mandates for preparing, sharing and reporting on quality-improvement plans</li> <li>3) Mandates for accreditation</li> <li>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)</li> <li>5) Value-based innovation-procurement model</li> <li>6) Funding and active support to spread effective practices across sites</li> <li>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations</li> <li>8) Mechanisms to jointly set rapid-learning and improvement priorities</li> <li>9) Mechanisms to identify and share the ‘reproducible building blocks’ of a rapid-learning health system</li> </ol>	<ul style="list-style-type: none"> <li>• Many organizations seek accreditation from Accreditation Canada which could include rapid-learning efforts as a focus for its accreditation efforts</li> <li>• Provincial Health Plan articulates goals in a number of important areas: <ul style="list-style-type: none"> <li>○ cost control/reduction</li> <li>○ performance excellence</li> <li>○ evidence-based decision-making</li> <li>○ better primary healthcare</li> <li>○ chronic-disease management</li> <li>○ better access to necessary medications</li> <li>○ more services, including palliative care, at home</li> <li>○ more long-term care facilities</li> <li>○ population health initiatives</li> <li>○ benchmarking</li> <li>○ equitable delivery of services</li> <li>○ investments in technology</li> </ul> </li> <li>• Priority Delivery Units have been established in recent years to drive performance improvements and increase accountability with respect to New Brunswick’s priorities</li> <li>• <u>VBalanced Scorecard Report</u> is a strategic planning and management tool that allows Horizon Health Network to monitor the implementation of its strategic plan</li> <li>• Gaps may include the current decentralization of the system (while the two regions have the same legal framework, they operationalize their systems differently); the global budgeting model which remains predominant; and the lack of consensus on indicators that should be part of a comprehensive dashboard to monitor and assess health-system performance</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<p><b>Culture of rapid learning and improvement:</b> Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability</p>	<ol style="list-style-type: none"> <li>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’</li> </ol>	<ul style="list-style-type: none"> <li>• Horizon Health Network and Vitalité Health Network have initiatives to foster a culture of rapid learning and improvement (e.g., establishment of clinical learning networks on aging, cancer, mental health)</li> <li>• Gaps may include the predominant culture of the solo practitioner which may be difficult to change</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Competencies for rapid learning and improvement:</b> 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</p>	<ol style="list-style-type: none"> <li>1) Public reporting on rapid learning and improvement</li> <li>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)</li> <li>3) In-house capacity for supporting rapid learning and improvement</li> <li>4) Centralized specialized expertise in supporting rapid learning and improvement</li> <li>5) Rapid-learning infrastructure (e.g., learning collaboratives)</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">Consortium national de formation en santé</a> is a pan-Canadian group of 11 university and college institutions offering French-language programs in various health disciplines, and regional partners to improve access to French-language health training programs across the country</li> <li>• New Brunswick is home to two medical training programs, <a href="#">Dalhousie Medicine New Brunswick</a> based in Saint John and the <a href="#">Centre de formation médicale du Nouveau-Brunswick</a> based in Moncton, providing students with the opportunity to study medicine in their home province</li> <li>• The government also sponsors medical school seats at <a href="#">Memorial University of Newfoundland</a>, <a href="#">Université Laval</a>, and <a href="#">Université de Montréal</a></li> <li>• Horizon Health Network and Vitalité Health Network offer off-the-shelf certifications/training programs</li> <li>• Gaps may include the absence of provincial training programs to develop competencies for rapid learning and improvement</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

**Table 2: Assets and gaps in the primary-care sector in New Brunswick**

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Engaged patients:</b> 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</p>	<ol style="list-style-type: none"> <li>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)</li> <li>2) Engage patients, families and citizens in:                             <ol style="list-style-type: none"> <li>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)</li> <li>b) their own care (e.g., shared decision-making; use of patient decision aids)</li> <li>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)</li> <li>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)</li> <li>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)</li> <li>f) research (e.g., engaging patients as research partners; eliciting patients’ input on research priorities)</li> </ol> </li> <li>3) Build patient/citizen capacity to engage in all of the above</li> </ol>	<ul style="list-style-type: none"> <li>• Gaps may include the lack of a clear accountability framework for primary care with clear performance indicators</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick SPOR Network in Primary and Integrated Health Care Innovations</a> hosted its inaugural Patients' Den, during which researchers had to pitch their projects to a panel of judges made up of patient advisors</li> </ul>
<p><b>Digital capture, linkage and timely sharing of relevant data:</b> 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)</p>	<ol style="list-style-type: none"> <li>1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)</li> <li>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs</li> <li>3) Capacity to capture longitudinal data across time and settings</li> <li>4) Capacity to link data about health, healthcare, social care, and the social determinants of health</li> <li>5) Capacity to analyze data (e.g., staff and resources)</li> <li>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)</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Health Council's primary health survey</a> aims to understand and report on New Brunswickers' experiences with primary health services, more specifically at the community level</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Timely production of research evidence:</b> Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations</p>	<ol style="list-style-type: none"> <li>1) Distributed capacity to produce and share research (including evaluations) in a timely way</li> <li>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations</li> <li>3) Capacity to synthesize research evidence in a timely way</li> <li>4) One-stop shops for local evaluations and pre-appraised syntheses</li> <li>5) Capacity to access, adapt and apply research evidence</li> <li>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers</li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick SPOR Network in Primary and Integrated Health Care Innovations</a> focuses on “patients with complex needs across the life span”, capacity building of expertise in the province, and knowledge-translation strategies</li> </ul>
<p><b>Appropriate decision supports:</b> Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks</p>	<ol style="list-style-type: none"> <li>1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as               <ol style="list-style-type: none"> <li>a) patient-targeted evidence-based resources</li> <li>b) patient decision aids</li> <li>c) patient goal-setting supports</li> <li>d) clinical practice guidelines</li> <li>e) clinical decision support systems (including those embedded in electronic health records)</li> <li>f) quality standards</li> <li>g) care pathways</li> <li>h) health technology assessments</li> <li>i) descriptions of how the health system works</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<p><b>Aligned governance, financial and delivery arrangements:</b> 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</p>	<ol style="list-style-type: none"> <li>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</li> <li>2) Mandates for preparing, sharing and reporting on quality-improvement plans</li> <li>3) Mandates for accreditation</li> <li>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)</li> <li>5) Value-based innovation-procurement model</li> <li>6) Funding and active support to spread effective practices across sites</li> <li>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations</li> <li>8) Mechanisms to jointly set rapid-learning and improvement priorities</li> <li>9) Mechanisms to identify and share the ‘reproducible building blocks’ of a rapid-learning health system</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">Vitalité Health Network</a> wants to shift toward primary care with major emphasis on ambulatory and community care as well as home care</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

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Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Culture of rapid learning and improvement:</b> Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability</p>	<p>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’</p>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<p><b>Competencies for rapid learning and improvement:</b> 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</p>	<p>1) Public reporting on rapid learning and improvement                  2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)                  3) In-house capacity for supporting rapid learning and improvement                  4) Centralized specialized expertise in supporting rapid learning and improvement                  5) Rapid-learning infrastructure (e.g., learning collaboratives)</p>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

**Table 3: Assets and gaps in the area of aging (or for the elderly population or a relevant ‘problem focus,’ such as frailty) in New Brunswick**

Characteristic	Examples	Health-system receptors and supports	Research-system supports
<p><b>Engaged patients:</b> 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</p>	<ol style="list-style-type: none"> <li>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)</li> <li>2) Engage patients, families and citizens in:                             <ol style="list-style-type: none"> <li>a) their own health (e.g., goal setting; self-management and living well with conditions; access to personal health information, including test results)</li> <li>b) their own care (e.g., shared decision-making; use of patient decision aids)</li> <li>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)</li> <li>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)</li> <li>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)</li> <li>f) research (e.g., engaging patients as research partners; eliciting patients’ input on research priorities)</li> </ol> </li> <li>3) Build patient/citizen capacity to engage in all of the above</li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<p><b>Digital capture, linkage and timely sharing of relevant data:</b> 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)</p>	<ol style="list-style-type: none"> <li>1) Data infrastructure (e.g., interoperable electronic health records; immunization or condition-specific registries; privacy policies that enable data sharing)</li> <li>2) Capacity to capture patient-reported experiences (for both services and transitions), clinical encounters, outcomes and costs</li> <li>3) Capacity to capture longitudinal data across time and settings</li> <li>4) Capacity to link data about health, healthcare, social care, and the social determinants of health</li> <li>5) Capacity to analyze data (e.g., staff and resources)</li> <li>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,</li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

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Characteristic	Examples	Health-system receptors and supports	Research-system supports
	organization and system-wide rapid learning and improvement)		
<b>Timely production of research evidence:</b> Systems produce, synthesize, curate and share (with individuals at all levels) research about problems, improvement options and implementation considerations	<ol style="list-style-type: none"> <li>1) Distributed capacity to produce and share research (including evaluations) in a timely way</li> <li>2) Distributed research ethics infrastructure that can support rapid-cycle evaluations</li> <li>3) Capacity to synthesize research evidence in a timely way</li> <li>4) One-stop shops for local evaluations and pre-appraised syntheses</li> <li>5) Capacity to access, adapt and apply research evidence</li> <li>6) Incentives and requirements for research groups to collaborate with one another, with patients, and with decision-makers</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">Healthy Seniors Pilot Project</a> (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</li> </ul>	<ul style="list-style-type: none"> <li>• Horizon Health Network supports research in geriatrics</li> <li>• <a href="#">New Brunswick Innovation Fund</a> identified aging as a priority area</li> </ul>
<b>Appropriate decision supports:</b> Systems support informed decision-making at all levels with appropriate data, evidence, and decision-making frameworks	<ol style="list-style-type: none"> <li>1) Decision supports at all levels – self-management, clinical encounter, program, organization, regional health authority and government – such as               <ol style="list-style-type: none"> <li>a) patient-targeted evidence-based resources</li> <li>b) patient decision aids</li> <li>c) patient goal-setting supports</li> <li>d) clinical practice guidelines</li> <li>e) clinical decision support systems (including those embedded in electronic health records)</li> <li>f) quality standards</li> <li>g) care pathways</li> <li>h) health technology assessments</li> <li>i) descriptions of how the health system works</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<b>Aligned governance, financial and delivery arrangements:</b> 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	<ol style="list-style-type: none"> <li>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</li> <li>2) Mandates for preparing, sharing and reporting on quality-improvement plans</li> <li>3) Mandates for accreditation</li> <li>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)</li> <li>5) Value-based innovation-procurement model</li> <li>6) Funding and active support to spread effective practices across sites</li> <li>7) Standards for provincial expert groups to involve patients, a methodologist, use existing data and evidence to inform and justify their recommendations</li> <li>8) Mechanisms to jointly set rapid-learning and improvement priorities</li> </ol>	<ul style="list-style-type: none"> <li>• <a href="#">Council on Aging</a> 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</li> <li>• <a href="#">Ministry of Social Development</a> (and its Nursing Home Services branch) is responsible for the planning, design, monitoring and inspection of the services provided to residents in nursing homes</li> <li>• 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)</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>

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		
<p><b>Culture of rapid learning and improvement:</b> Systems are stewarded at all levels by leaders committed to a culture of teamwork, collaboration and adaptability</p>	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’	<ul style="list-style-type: none"> <li>• <a href="#">New Brunswick Collaborative for Healthy Aging and Care</a> 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</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>
<p><b>Competencies for rapid learning and improvement:</b> 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</p>	<ol style="list-style-type: none"> <li>1) Public reporting on rapid learning and improvement</li> <li>2) Distributed competencies for rapid learning and improvement (e.g., data and research literacy, co-design, scaling up, leadership)</li> <li>3) In-house capacity for supporting rapid learning and improvement</li> <li>4) Centralized specialized expertise in supporting rapid learning and improvement</li> <li>5) Rapid-learning infrastructure (e.g., learning collaboratives)</li> </ol>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>	<ul style="list-style-type: none"> <li>• None identified</li> </ul>





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