OCTOBER 2016

Chronic conditions and health service quality: Are we meeting the need?

Who we are

New Brunswickers have a right to be aware of the decisions being made, to be part of the decision-making process, and to be aware of the outcomes delivered by the health system and its cost. The New Brunswick Health Council (NBHC) will foster this transparency, engagement, and accountability by engaging citizens in a meaningful dialogue, measuring, monitoring, and evaluating population health and health service quality, informing citizens on health system performance and recommending improvements to the Minister of Health.

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Les problèmes de santé chroniques et la qualité des services de santé : les besoins sont-ils satisfaits?

Chronic health conditions: How health services have responded

In April 2016, the New Brunswick Health Council (NBHC) released *Recognizing and Focusing on Population Health Priorities*, which highlighted the trend in New Brunswick of an increased rate of chronic health conditions appearing at younger ages.

In June 2016, our report *The Cost of Chronic Health Conditions to New Brunswick* described the financial pressures that chronic health conditions are currently exerting on our health system and possible future implications if we maintain the status quo. It identified two priority areas for the health system:

1. Reducing the incidence of new chronic health conditions in the population of New Brunswick through resource reallocation that improves illness prevention and health promotion

2. Managing existing chronic health conditions by aligning health system resources to population needs with an emphasis on comprehensive primary health services and other community health services

This report looks at how current health services are responding to these two priority areas. We will do this by measuring the quality of the delivery of health services, especially primary health services delivered to the segment of the population with chronic conditions.

Services available for prevention, management and support

Health services for prevention, management and support are developed to respond to the health needs in a community that are best addressed outside of a hospital setting. These include services such as prevention, health promotion, primary care providers, supportive services and long-term care options.

For individuals with chronic health conditions, interaction with a regular primary care provider and related support services (if needed) are the best way to support self-management, leading to better health outcomes related to these conditions.

Table 1. **Programs and services for prevention, management and support**

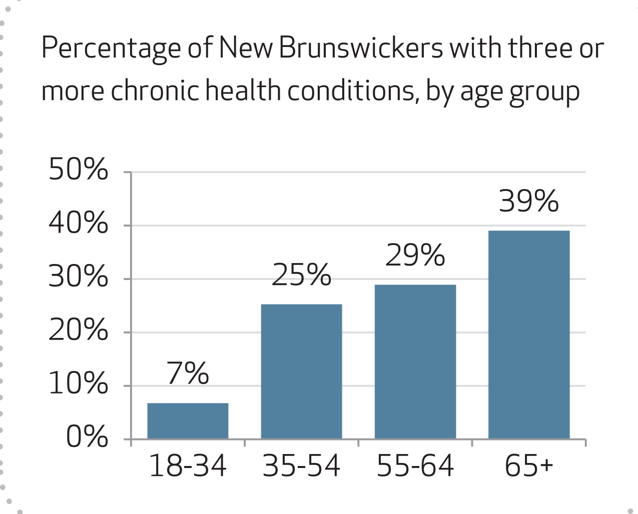
- Primary care providers (physicians, nurse practitioners, etc.)
- Prescription Drug Program
- Extended health insurance
- Public Health (prevention and health promotion)
- Tele-Care services
- Ambulance services
- After-hours clinics
- Health centres
- Community health centres
- Emergency services
- Mental health and addictions services
- Extra-Mural Program
- Home support services
- Rehabilitation services
- Vision/Dental/Pharmacy services
- Specialist physicians
- Long Term Care services

More citizens with chronic health conditions

We know that chronic health conditions are leading to increased illness and activity limitation for the citizens of New Brunswick. This was identified both from the chronic health conditions that are appearing at earlier ages (see Figure 1) and the increase over time of the proportion of the population with three or more chronic health conditions (18.2% in 2011 to 20% in 2014). In addition, 6 out of 10 of those with three or more chronic health conditions are under the age of 65, which should cause serious concern to New Brunswickers.

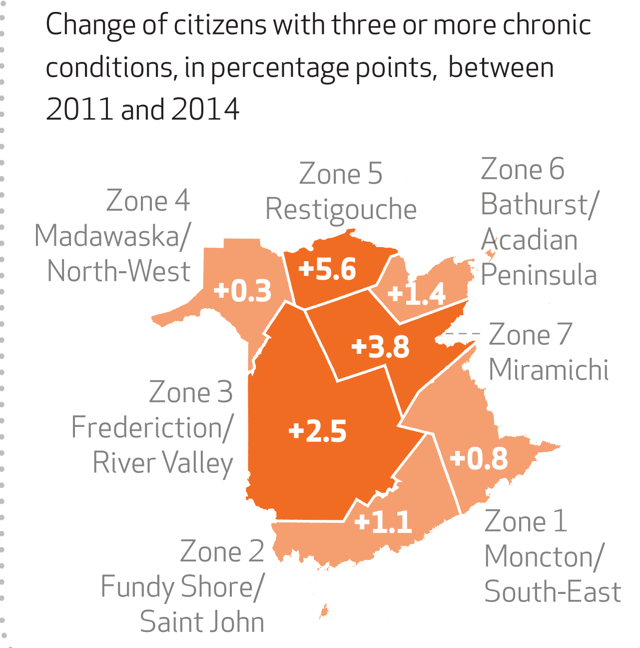
Beyond the increase in chronic health conditions in the population, it is also important to recognize the variability in the rates of these conditions by location in the province. From 2011 to 2014, Zone 5 showed the greatest increase in the percentage of the population with three or more chronic health conditions.

Figure 1. **Chronic health conditions are appearing at earlier ages**



Source: 2014 edition of NBHC's Primary Health Survey

Figure 2. **There is variability by zone in the increase of people with three or more chronic conditions**



Source: 2014 edition of NBHC's Primary Health Survey

While some of this can be attributed to the aging population in the zone, a comparison with Zone 6 (which has similar trends related to aging) shows a much lower increase in chronic conditions. Looking at zones 1 and 3, both of which have lower rates of individuals over 65 years old, we see a similar discrepancy in the increase in conditions.

This indicates that not all of New Brunswick's increase in chronic conditions is age-related, and that there are opportunities for stakeholders to compare zones to identify factors that contribute to these different rates.

For more information on the variability in age and chronic conditions by zone, see Appendix 1 and Appendix 2.

Health system quality and managing chronic conditions

NBHC dimensions of quality

The NBHC evaluates the quality of health services using indicators that are sorted by specific dimensions of quality. These dimensions of quality help to ensure that quality of service is fully evaluated, and that no parts of the service are left unconsidered.

One of the key methods used by the NBHC to evaluate the performance of primary health services is by using data on citizens' responses to the New Brunswick Primary Health Survey, conducted every three years. This information, along with other indicators, provides a solid image of the quality of the primary health services delivered in New Brunswick.

The following table describes the quality dimensions, and provides examples of indicators that can be used to evaluate health services.

Table 2. **NBHC dimensions of quality**

Dimension of quality	Descriptor	Example indicators
Accessibility	The ability of patients/clients to obtain care/service at the right place and the right time, based on respective needs, in the official language of their choice.	• Has primary care provider • Has medication coverage • Appointment available same or next day
Appropriateness	Care/service provided is relevant to the patients'/clients' needs and based on established standards.	• Talked with a health professional about things they could do to improve their health • Colorectal cancer screening above age 50
Effectiveness	The care/service, intervention or action achieves the desired results.	• "Very confident" in managing conditions • Ambulatory care sensitive conditions
Efficiency	Achieving the desired results with the most cost-effective use of resources.	• Goes most often to ER as regular place of care • ER triage levels 4 and 5
Safety	Potential risks of an intervention or the environment are avoided or minimized.	• Knows what their medications are for • Has been harmed because of a medical error (excluding overnight hospital stay)
Equity	Providing quality care/service to all, regardless of individual characteristics and circumstances, such as race, color, creed, national origin, ancestry, place of origin, language, age, physical disability, mental disability, marital status, family status, sexual orientation, sex, social status or belief or political activity.	Comparison of above indicators for general population and target population to identify inequities

Key elements of quality health services for patients with chronic conditions

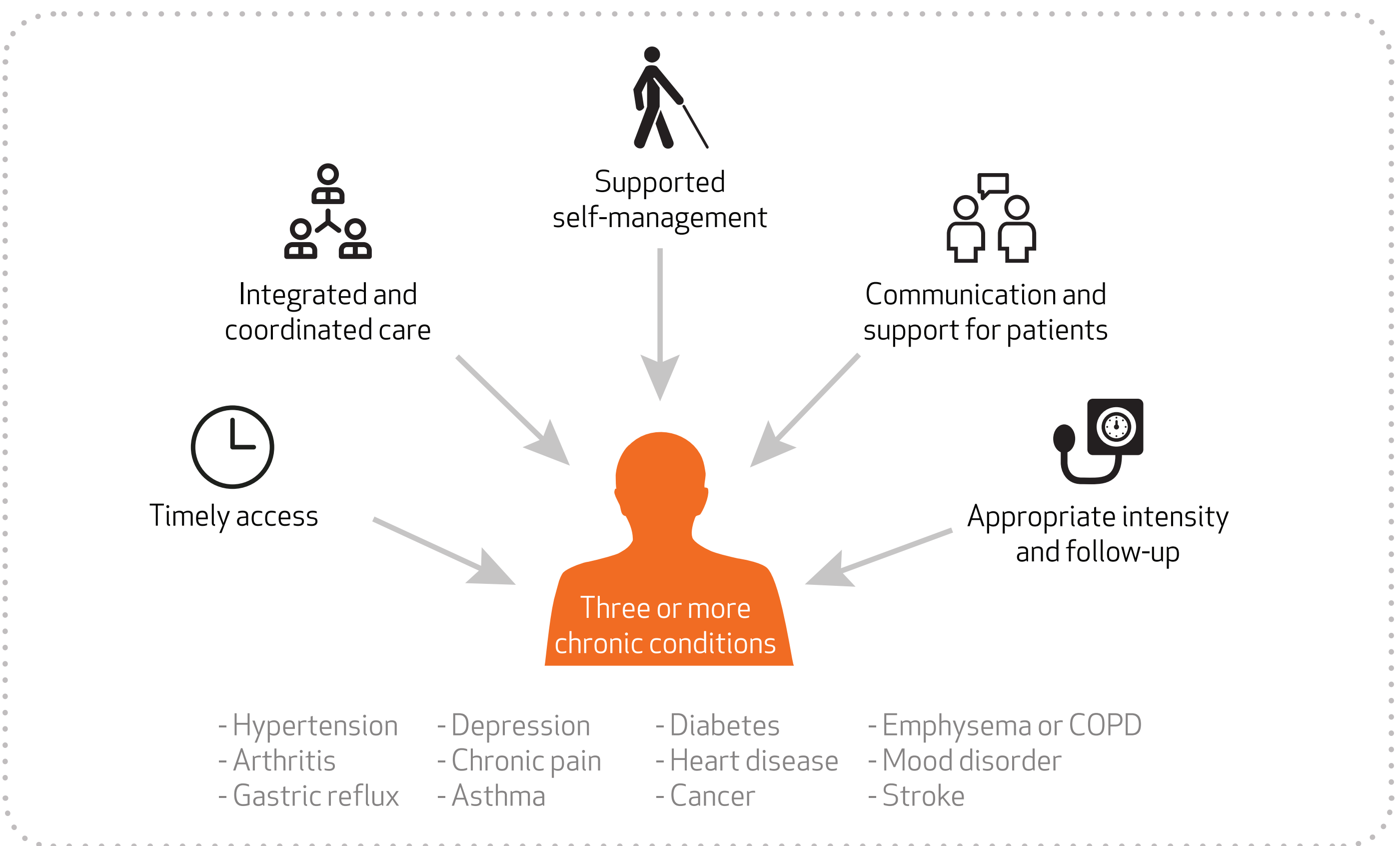
Research[1] has identified specific elements within the delivery of primary health services that support optimal quality of care for citizens diagnosed with three or more chronic conditions:

- Timely access
- Integrated and coordinated care
- Supported self-management
- Communication and support for patients
- Appropriate intensity and follow-up

These elements have been linked to better patient outcomes or quality of life. This enables us to focus on certain dimensions when considering health service quality for specific groups of patients and to identify the best indicators to use in evaluation.

Using these elements in conjunction with the indicators and dimensions of quality, the NBHC made some observations which can serve as points for consideration regarding health service quality for individuals with three or more chronic health conditions.

Figure 3. **Elements for primary health services that support optimal quality of care when treating those with three or more chronic health conditions**



Modified list of elements from: The King's Fund, "How to deliver high-quality, patient-centred, cost-effective care", 2010. [Online]. http://www.kingsfund.org.uk/sites/files/kf/how-to-deliver-high-quality-patient-centred-cost-effective-care-16-september-2010-kings-fund.pdf

Observations on quality of care for New Brunswickers with multiple chronic conditions

Note: All indicators used in observations are from the 2014 edition of the NBHC's Primary Health Survey

LEGEND

0 New Brunswickers with no chronic conditions

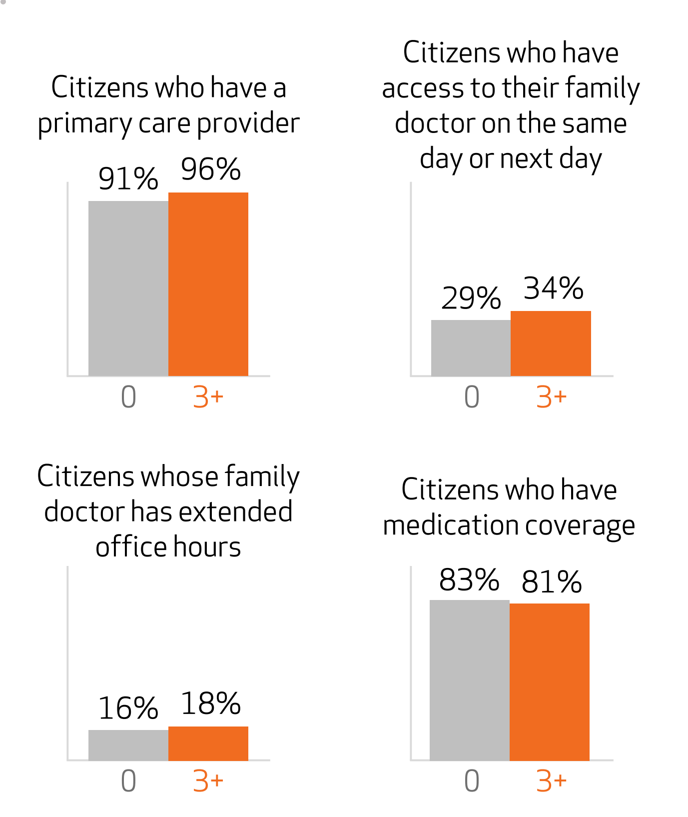
3+ New Brunswickers with three or more conditions

Timely access

Access to primary care providers not always managed according to need

While timely access is important for all citizens, it is critical to deliver optimal quality of service to citizens with three or more chronic health conditions. The results seen on accessibility indicators must reflect this prioritization. While New Brunswick has good results for access to primary care providers and medication coverage, the unaddressed need among those with chronic conditions negatively impacts the quality of service, and possibly their health and quality of life as well. The results for the indicators extended office hours and access to a primary care provider on the same or next day show even greater unmet need.

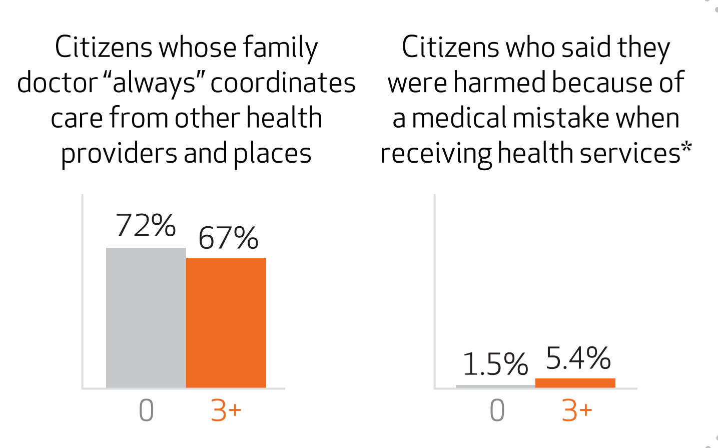
Also, among citizens who prefer service in French, there is an inequity of service as only 22.2% report access to their family doctor on the same day or next day compared to 32.6% who prefer service in English. Lack of timely access to affordable medication can also result in negative outcomes.



Integrated and coordinated care

Coordination of care not always based on need

Lack of coordination of care between the family doctor and other health professionals can result in demands on patients' time and greater efforts to acquire services. Also, the increased number of points of contact for citizens with three or more chronic conditions results in an increased possibility of complications and harm, many of which would be preventable through coordination.



*Excludes hospital stays

Care coordination

A few patients with good health never need care coordination. Ideally, they have a primary care provider for their health service needs rather than making an emergency room visit. But the majority of New Brunswickers are likely to need care coordination at some point in time. Approximately 372,000 adults in New Brunswick have a chronic health condition. They are at greatest need for care coordination as individuals working with multiple health service providers may receive conflicting medications or other treatments without coordination. The likelihood of this conflict increases as the number of chronic conditions per person increases.

	Number of chronic health conditions		
	None	One or two	Three or more
Proportion of adult population	38%	42%	20%
Has been hospitalized	5%	11%	22%
Number of points of contact with health service providers (average number per year)	4	6	11
Need for care coordination	Least	More	Most

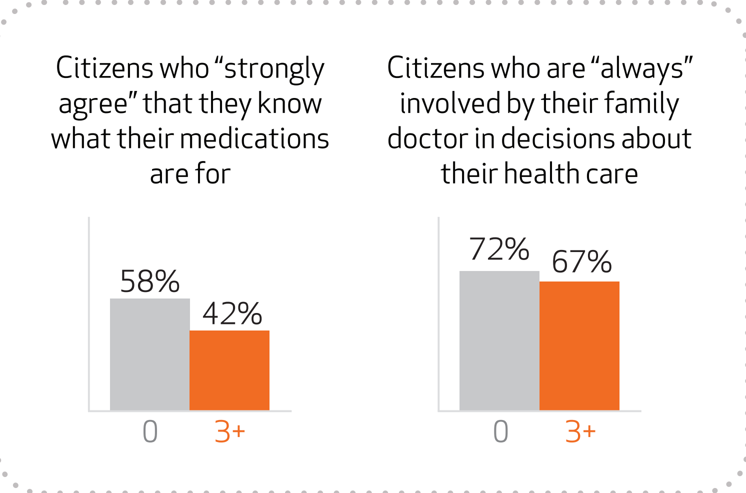
For a list of the different interactions where care coordination is needed, see Appendix 3.

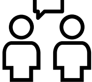
Supported self-management

Less decision involvement and knowledge of medications as chronic health conditions increase

While patients with more chronic conditions are likely to use more medications with possible serious side effects, they are less likely to know what these medications are for, making them less likely to know how to prevent future health problems. This affects adherence to medication regimens and related patient outcomes.

These patients are also less likely to identify as involved in decisions with family doctors about their health care. Active participation in care is associated with healthier behaviors, better chronic disease outcomes and medication adherence and better care coordination.

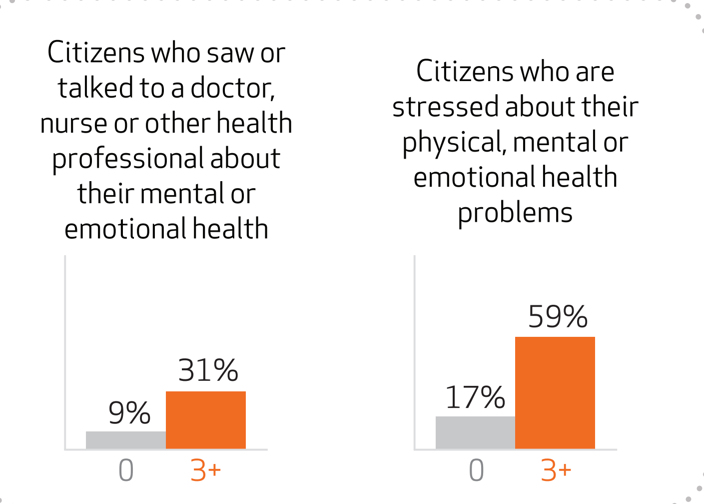




Communication and support for patients

More mental health support, but there is still unmet need

While the NBHC's survey results do indicate an increase in offers of support to patients with three or more chronic health conditions, that increase may not be sufficient to meet their full need.

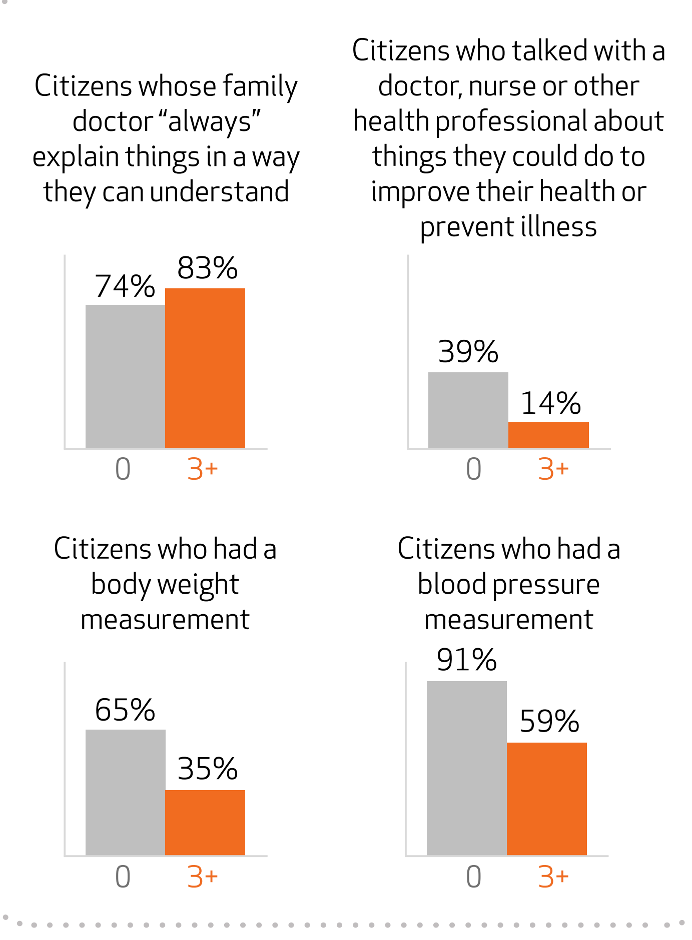


Appropriate intensity and follow-up

Screening and follow-up not always managed according to need

While all New Brunswickers should be receiving appropriate screening and early risk factor management given our more obese population and greater risk factors for chronic diseases, individuals with three or more chronic health conditions have an even greater need for these services.

When these services are available to those who need them, they can support the prevention or limit the progression of chronic health conditions.

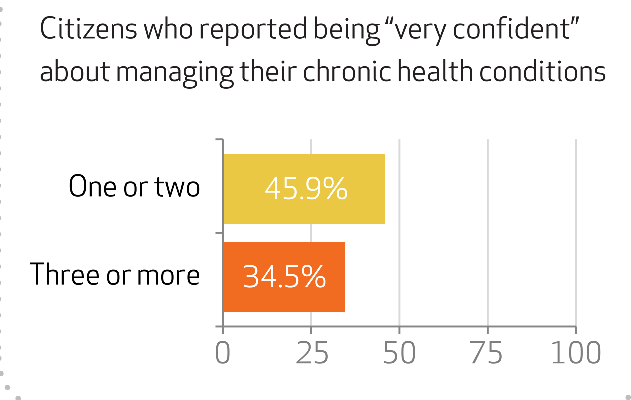


Patient confidence and health service quality

The quality dimension of effectiveness (doing what is required to achieve the best possible results) is closely related to the appropriateness of the service[2].

One of the indicators the NBHC has been using to measure effectiveness of primary health services is patient confidence in managing their chronic health conditions.

Figure 4. **The more chronic conditions citizens have, the less confident they are in their ability to manage them**



Source: 2014 edition of the NBHC's Primary Health Survey

The fact that less than 4 out of 10 people (34.5%) with three or more chronic health conditions are "very confident" in self-management demonstrates a shortfall in effectiveness with significant room for improvement.

What is self-management?

Patients feel better and use health services differently when they have the information, skills, and confidence to manage the physical and emotional impacts of their disease. The process of helping patients become successful in this way has come to be known as self-management support and, appropriately, it is attracting attention as concerns mount about the rising rates of chronic disease. Failure to help more people with self-management will carry a hefty price tag.

Indicator insight: What confidence in self-management can tell us about citizens' experiences

The NBHC, through analysis of data from the 2014 edition of the Primary Health Survey, identified that citizens who are very confident at managing their chronic health conditions are more likely to:

- know what their medications are for
- know how to prevent future health problems
- go to their primary care provider as their regular place of care
- believe that their health largely depends on how well they take care of themselves
- feel involved in decisions about their care (by their primary care provider)

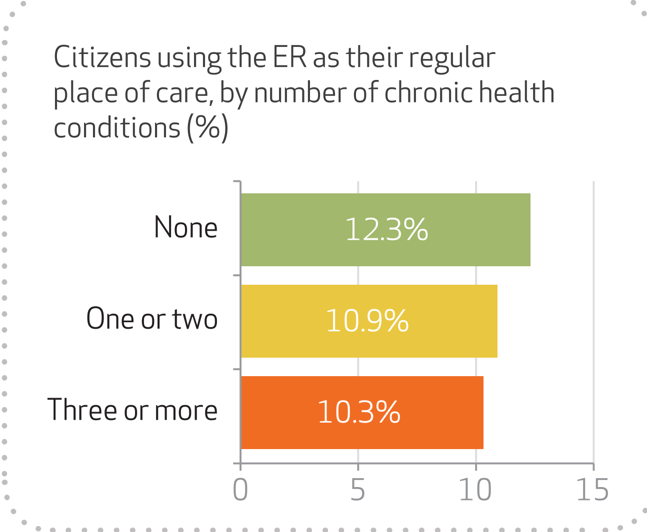
(See Appendix 4 for correlations/associated factors.)

ER use as regular place of care and health service quality

Given that 41% of New Brunswickers visit an ER (emergency room) in a year, it is important to determine whether this is the best setting for them to receive health services. A key indicator that the NBHC has been using to measure the efficiency (making the best use of the resources) of the delivery of primary health services is "citizens using the ER as their **regular place of care**". ERs, by their nature, are meant to be used infrequently by patients, primarily to be assessed for, or to receive, acute care services.

When any New Brunswicker is using an ER as the regular place of care, it results in less efficient service delivery, but this inefficiency increases when the person in question has three or more chronic health conditions.

Figure 5. **One in ten New Brunswickers use the ER as their regular place of care**



Source: 2014 edition of the NBHC's Primary Health Survey

The fact that 1 in 10 people are using the emergency room as their regular place of care when primary health services are needed results in health service delivery that is:

- more expensive
- susceptible to less continuity
- often less coordinated
- less able to promote self-care

This inefficient use of health services can create a significant threat to:

- health system sustainability
- population health
- health service quality

This potential "triple threat" makes it essential that the health system address the reasons why citizens are using the ER as their regular place of care.

Indicator insight: What the use of the ER as a regular place of care can tell us about citizens' experiences

The NBHC, through analysis of data from the 2014 edition of the Primary Health Survey, identified that citizens using the ER as their regular place of care are:

- Less likely to be able to access their primary care provider within 5 days
- More likely to not have insurance coverage for prescription medications
- Less likely to use their primary care provider as their regular place of care
- Less likely to know what their medications are for
- Less likely to know how to prevent future health

problems
- Less likely to feel involved in decisions about their care (by their primary care provider)
- More likely to live in a low income household ($25,000 or less)
- Less likely to believe that their health depends on how well they take care of themselves

(See Appendix 4 for correlations/associated factors.)

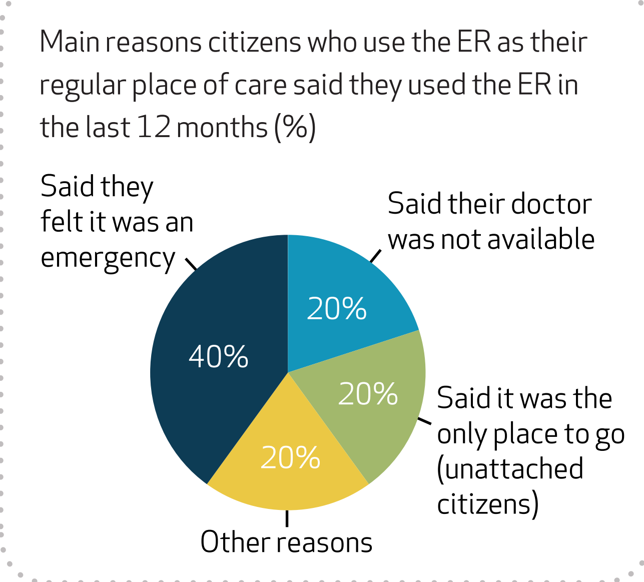
The NBHC's analysis also identified a statistically significant difference in ER usage as regular place of care based on preferred language of service. Citizens preferring to receive services in French report this sort of ER usage at a rate of 18.8%, compared to 9.0% reported by citizens preferring to receive service in English. This may be related to their greater difficulty in accessing timely service from a family doctor. Additional analysis of this inequity by the health system stakeholders is encouraged.

Reasons given by citizens for using the ER as a regular place of care

Looking at the reasons offered by citizens, there are potential efficiencies to respond to them. Individuals requiring primary health services who have no doctor or one who is unavailable would experience greater coordination and support from a primary care provider. This appropriateness of setting would also encourage greater confidence in self-management for those with chronic conditions. Within the 40% who felt there was an emergency, those who have incorrectly evaluated the situation would also benefit similarly.

More than 60% of these individuals would benefit from being connected with an alternative to regular use of the ER for care. Furthermore, the majority of these solutions would also reduce usage among the 41% of all New Brunswickers using the ER annually, reducing ER usage and associated costs.

Figure 6. **60% of citizens use the emergency room for non emergency reasons**



Source: 2014 edition of the NBHC's Primary Health Survey

Possible health system responses to this issue

We can see from the answers provided that there are often reasons for visiting the ER that could be better addressed by visiting a primary care provider. This shift in the usage of health resources and service delivery would have an impact on the threats to the health system and free up resources for better allocation. Possible immediate responses to this issue that would improve health service quality include:

1. Continue and improve upon current efforts to attach citizens to primary care providers, especially those with three or more chronic health conditions, or those at increased risk
2. Encourage the availability of appointments with primary care providers within 48 hours, especially for citizens with three or more health conditions
3. Promote the availability of services (Tele-Care, consultation with pharmacist, contact with physician's office, etc.) that can help citizens determine whether a particular health need is an emergency, or whether it is better treated by a primary care provider.

Efforts such as these will help address specific issues of health service quality while providing multiple benefits to New Brunswick and its citizens.

A brief note on equity

While we have emphasized the experiences of individuals with three or more chronic health conditions in this document, it would be inappropriate to neglect the equity dimension of health service quality.

Given the reality that some populations have increased rates of some chronic conditions (Aboriginal persons, or those with lower socioeconomic status , for example) and that these same populations can experience inequities with regard to health services (reduced accessibility, reduced appropriateness), it becomes even more imperative to ensure that health service delivery with these populations has both the dimensions of quality and the key elements of service delivery to individuals with multiple chronic health conditions designed into the services.

Such an emphasis may also help health service providers improve their overall performance as the impact of these improvements on resource usage and cost cascade through the entire system.

How is the response of health system partners changing?

In the last few years, Horizon Health Network, Vitalité Health Network and the Department of Health have been following and discussing an indicator called ambulatory care sensitive conditions and its impact on potentially avoidable hospitalizations.

Ambulatory care sensitive conditions include...

- Angina
- Asthma
- COPD
- Diabetes
- Heart failures
- Grand mal status and other epileptic convulsions
- Pulmonary edema
- Hypertension

The rationale is that if these conditions receive quality health care (from the perspective of all the quality dimensions), it will reduce the need of individuals with these conditions to be hospitalized. In effect, the health system partners are using this indicator as a measure of health system quality.

Although New Brunswick has been showing some improvements, our efforts are simply in line with Canada and we continue to rank 9 out of 10 worst among provinces (see appendix 5).

There has been an acknowledgement that significant changes in lowering the rates will require redesigning many programs and services that can impact or influence the hospitalizations of citizens with these conditions.

While the need has been acknowledged, prevention, health promotion and primary health care have not received the sustained focus needed for the transition. Instead, there are continued increases in resource allocation to hospital services or long term care and decreases to community-based and preventative services.

The NBHC's annual evaluation of health service quality sheds light on the continued challenges faced by primary and prevention services as the shift is not made. As the primary reporting tool of health service quality, the NBHC's Health System Report Card has monitored performance based on New Brunswick's standing relative to other provinces. The results have demonstrated over six years that the quality of primary health services is the weak link within the health system in New Brunswick. With the exception of one C in 2011, Primary Health Services has received a consistent rating of D from 2010 to 2014.

Grades and indicators related to the entire health system and all of the NBHC's dimensions of quality can be accessed on the NBHC website.

Next steps to address these issues

In order to address the clinical and financial pressures due to chronic health conditions, there is a need to:

1. Promote and implement interventions that impact early in life, as well as target high risk populations and invest in cost-effective prevention, while innovating and building the evidence-base on what works to reduce chronic diseases.

2. Define and design comprehensive primary health services that are based on elements of optimal quality of care, based on needs of the population being served (aiming for equity) and not a 'one size fits all' approach.

3. Measure progress on reducing chronic diseases and engender accountability for action that supports citizens in receiving appropriate services, in the appropriate setting that will translate into effective clinical care and efficient use of services.

Doing this effectively at the provincial level requires a thorough understanding of the needs and resources available at the level of the community. This occurs through a process of Community Needs Assessments (CNAs). Both Regional Health Authorities have been undertaking CNAs and using them as part of their system planning and decision-making.

RHAs and community needs

Regional Health Authorities (RHAs) have in their Act the determination of health needs where a regional health authority shall:

(a) determine the health needs of the population that it serves
(b) determine the priorities in the provision of health services for the population it serves
(c) allocate resources according to the regional health and business plan

Our report on Child and Youth Health in November 2016 will provide greater understanding of the opportunities and needs related to providing services early in life, and our report in early 2017 will review the CNA process for each RHA. The NBHC will evaluate whether the work to date meets the objectives that were set and how well the assessments enable the accomplishment of the three points listed above.

References

[1] The King's Fund, "How to deliver high-quality, patient-centred, cost-effective care", 2010. [Online]. http://www.kingsfund.org.uk/sites/files/kf/how-to-deliver-high-quality-patient-centred-cost-effective-care-16-september-2010-kings-fund.pdf

[2] Canadian Medical Association, "CMA Policy - Appropriateness in Health Care", December 2014.

Appendix 1 - Change in age distribution, by zone, from 2006 to 2011

	Age group	2006 (%)	2011 (%)	Change
Zone 1 Moncton / South-East	0-19	22	21	-1
	20-39	26	26	0
	40-64	37	38	+1
	65 or more	15	16	+1
Zone 2 Fundy Shore / Saint John	0-19	24	23	-1
	20-39	24	23	-1
	40-64	37	38	+1
	65 or more	15	16	+1
Zone 3 Fredericton / River Valley	0-19	23	23	0
	20-39	27	26	-1
	40-64	36	36	0
	65 or more	14	15	+1
Zone 4 Madawaska / North-West	0-19	22	20	-2
	20-39	23	22	-1
	40-64	41	42	+1
	65 or more	14	17	+3
Zone 5 Restigouche	0-19	21	18	-3
	20-39	20	18	-2
	40-64	41	43	+2
	65 or more	18	21	+3
Zone 6 Bathurst /Acadian Peninsula	0-19	20	18	-2
	20-39	23	20	-3
	40-64	42	43	+1
	65 or more	15	19	+4
Zone 7 Miramichi	0-19	23	20	-3
	20-39	24	21	-3
	40-64	38	40	+2
	65 or more	15	18	+3

Appendix 2 - Change in proportion of New Brunswickers with three or more chronic health conditions, by zone, from 2011 to 2014

	2011 (%)	2014 (%)	Change
Zone 1 Moncton / South-East	16.6	17.4	+0.8
Zone 2 Fundy Shore / Saint John	19.1	20.2	+1.1
Zone 3 Fredericton / River Valley	18.5	21.0	+2.5
Zone 4 Madawaska / North-West	18.5	18.8	+0.3
Zone 5 Restigouche	22.0	27.6	+5.6
Zone 6 Bathurst /Acadian Peninsula	20.0	21.4	+1.4
Zone 7 Miramichi	18.5	22.3	+3.8

Appendix 3 - Interactions that require care coordination

Provider-provider

Within a primary care practice

- PCP – other clinicians in the practice
- PCP – non-clinician staff in the practice
- Other clinicians in the practice – non-clinician staff in the practice
- PCP - physician on call (nights and weekends)

Between primary care practice and other providers

- PCP - specialist
- PCP - ancillary (lab, imaging, physical therapy, social worker, etc.)
- PCP - pharmacy
- PCP - emergency department
- PCP - hospitalist
- PCP - home care RN
- PCP - nursing home
- PCP - insurance company
- PCP - mental health system

Among other providers

- Specialist – hospital
- Specialist – hospitalist
- Specialist – pharmacy
- Specialist – imaging
- ED – hospital
- ED – pharmacy
- ED – imaging
- Disease management RN – other providers
- Hospital – home care RN
- Hospital – pharmacy
- Hospital – LTC
- Hospital physicians – hospital nurses
- Hospital physicians – hospital lab/x-ray
- Hospital nurses morning shift – hospital nurses night shift

Provider-family

- PCP – patient
- PCP – family
- Family caregiver – patient
- Other primary care clinicians/staff – patient/family
- Specialist – patient/family
- Disease management RN – patient/family
- Pharmacy – patient/family

ED = emergency department
PCP = primary care provider
Clinician = physician, nurse practitioner or physician assistant
RN = Registered nurse
LTC = Long term care

Appendix 4 - Pearson correlation of indicators

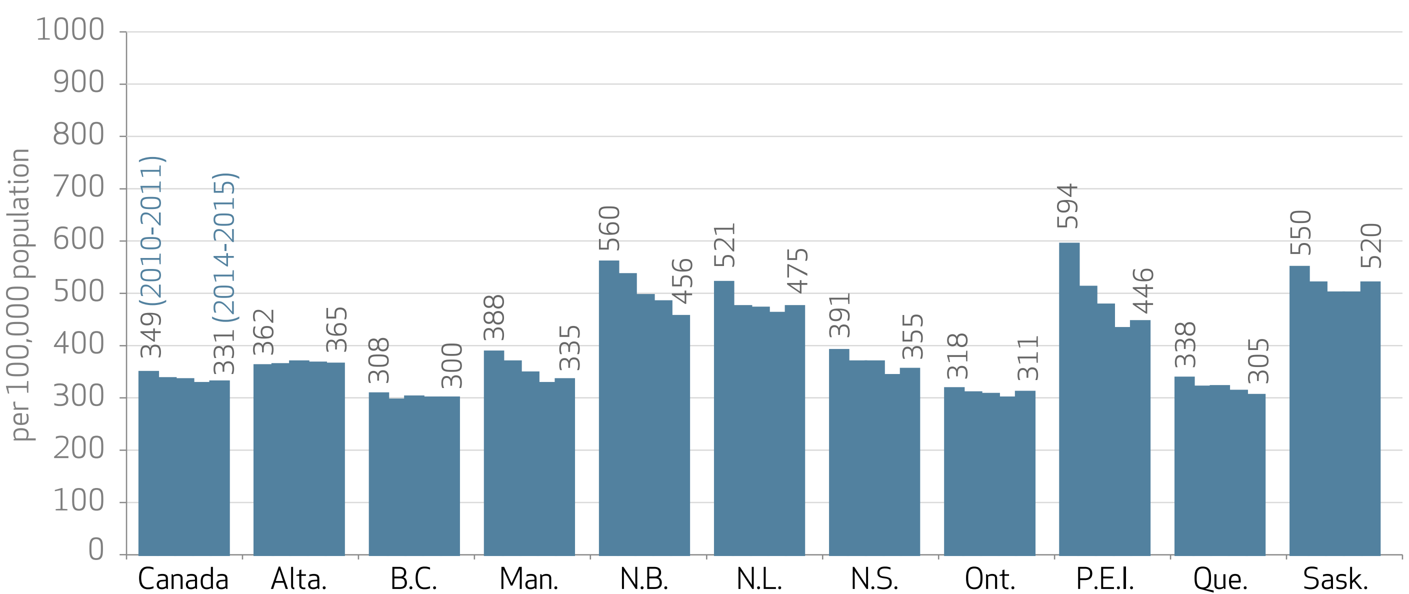
* = Correlation is significant at the 0.05 level (2-tailed)
** = Correlation is significant at the 0.01 level (2-tailed)

	Citizens who go to the ER as regular place of care	Citizens "very confident" at managing their chronic health conditions
Having access to a primary care provider	-0.372 *	0.137
Having access to a primary health team	-0.147	0.190
Having access to a family doctor	-0.295	0.219
Going to family doctor as regular place of care	-0.710 **	0.481 **
Going to ER as regular place of care	--	-0.421 *
Being "very confident" at managing chronic health condition	-0.421 *	--
Citizens who "strongly agree" they know what their medications are for	-0.684 **	0.534 **
Citizens who "strongly agree" they know how to prevent future problems with their chronic health condition	-0.646 **	0.480 **
Able to have an appointment with family doctor on the same day or next day	-0.628 **	0.421 *
Able to have an appointment with family doctor within 5 days	-0.779 **	0.438 *
Citizens whose family doctor makes home visits	-0.271	0.070
Citizens who reported "always" having enough time to discuss issues with their family doctor	-0.094	0.273
Citizens whose family doctor helps them coordinate care with other providers	-0.387 *	0.278
Citizens who said their family doctor seemed informed about their follow-up plan after a hospital stay	0.223	-0.042
Satisfaction with family doctor (8,9 or 10 on a scale of 0 to 10)	-0.063	0.239
Has not made any ER visits in the last 12 months	-0.797 **	0.385 *
Citizens who "always" talk with a health professional about things they can do to improve their health	0.329	-0.140
Being a current smoker	0.025	-0.018

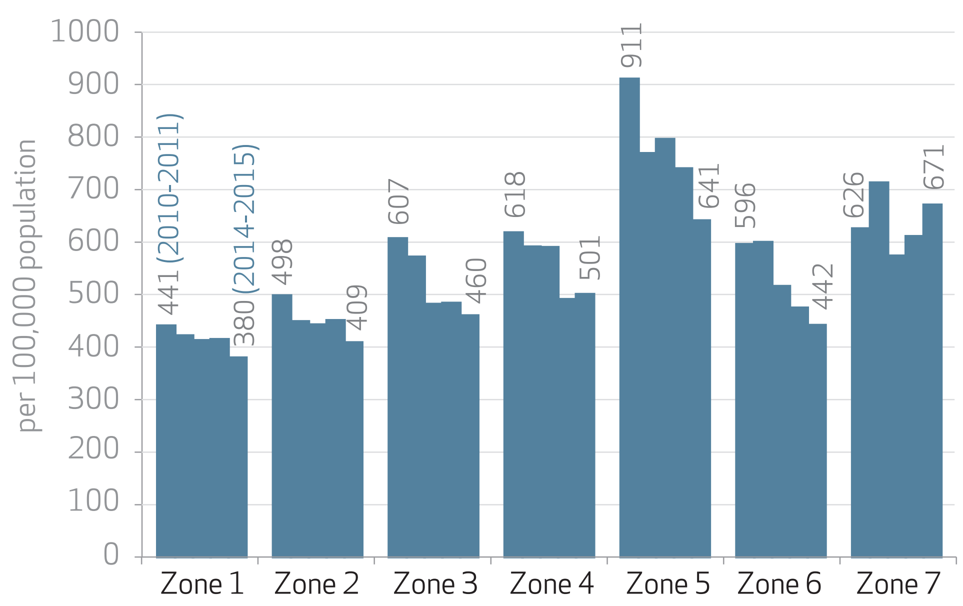
	Citizens who go to the ER as regular place of care	Citizens "very confident" at managing their chronic health conditions
Moderate or vigorous physical activity at least 2.5 hours a week	-0.028	0.095
Eating 5 portions of fruit and vegetables per day	-0.131	0.040
Reported having been harmed because of a medical error or mistake as a result of health services (excluding overnight hospital stay)	0.260	-0.076
Citizens who reported that their family doctor "always" explains things in a way that is easy to understand	0.025	0.364 *
Citizens who reported "rarely" or "never" having difficulty with written medical information	0.058	0.243
Citizens who reported that the advice they received for mental or emotional health was "very helpful"	0.565 **	-0.198
Citizens who "strongly agree" that their health largely depends on how well they take care of themselves	-0.521 **	0.478 **
Citizens who rated their overall hospital service experience favourably (8,9 or 10 out of 10)	0.380 *	0.078
Citizens who have said they had trouble navigating the health system	-0.016	0.214
Citizens who saw someone for a mental or emotional health issue	-0.191	0.064
Continuity of care indicator	0.578 **	-0.230
Citizens who live in a low-income ($25,000 or less) household	0.536 **	-0.313
Aboriginal identity	0.054	-0.228
Citizens without insurance coverage for medications	0.729 **	-0.398 *
Citizens who reported having transportation problems	0.118	-0.179
Citizens with a disability	-0.037	-0.288
Citizens with three or more chronic diseases	0.078	-0.243
Senior citizens	0.400 *	-0.386 *
Citizens who feel involved by their family doctor in decisions about their care	-0.645 **	0.452 **

Appendix 5 - Ambulatory care sensitive conditions (avoidable hospitalizations), from 2010-2011 to 2014-2015 (aged-standardized rates)

By province



By health zone (New Brunswick)



Source: Canadian Institute for Health Information