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Variability in Health Service Quality in New Brunswick

New Brunswick / Nouveau Brunswick

New Brunswick Health Council | Conseil de la santé du Nouveau-Brunswick

Variability in Health Service Quality

Much effort is still required to strengthen the collective understanding of the New-Brunswick health system sustainability challenge, whether from the perspective of the health needs of citizens, the distribution and evolution of resources, or the quality of health services. In this report, the New Brunswick Health Council (NBHC) will focus more in depth on the quality of health services.

While it is true that New Brunswick has often underperformed compared to the rest of the country in respect to several measures of health service quality, it is also true that health service quality varies greatly within the province from one geographic area to another. The analysis of this variability shows that some geographic areas perform very poorly, but also that some perform very well.

This last point is key and forms the basis for the central theme of this report: how can the provincial health system learn from the geographic areas that perform better in order to improve the quality of health services elsewhere?

To this end, this report first describes the need for an effective provincial accountability framework. This accountability framework must include benchmarking and the setting of performance targets.

Secondly, this report puts forth that the health system should a) prioritize the primary health sector as well as mental health and addiction services, and b) focus its efforts on two of the six dimensions of quality, namely accessibility and appropriateness, since the improvement of these two will have a ripple effect on the other dimensions of quality.

About the NBHC's six dimensions of quality

In order to report publicly on health service quality, the NBHC must consider the following quality dimensions:

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

Appropriateness: Care/service provided is relevant to the patients'/clients' needs and based on established standards

Effectiveness: Care/service, intervention or action achieves the desired results

Efficiency: Achieving the desired results with the most cost-effective use of resources

Equity: The ability to provide quality care/service to all, regardless of individual characteristics and circumstances.

Safety: Potential risks of an intervention or the environment are avoided or minimized.

Recognizing variability

The quality of health services varies greatly throughout New Brunswick. This variability between geographic areas can be observed in measures across the system, thus in all sectors, all quality dimensions as well as in all programs and services.

Analyzing and understanding this variability is extremely important. It can help in setting priorities to improve delivery of different programs and services, in making decisions on resource management, and in conducting benchmarking and setting performance targets for accountability and performance management in order to deliver equitable, quality health services to improve the health outcomes of the population.

Figure 1. The importance of analyzing and understanding variability

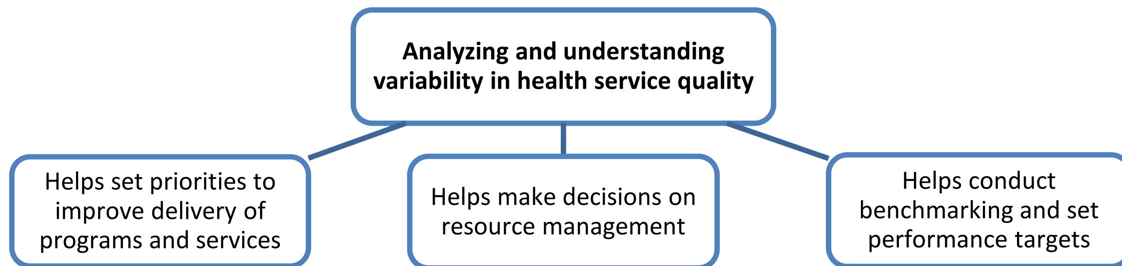


Figure 2. Examples of variability in health service quality

Citizens who can get an appointment with their family doctor within 5 days

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
62%	68%	63%	42%	49%	48%	63%

Results vary from 42% (Zone 4) to 68% (Zone 2)
(Difference of 26 percentage points)

Timely access has been rated by patients as one of the most important elements of primary health services [1]. Research also shows that untimely access to a family physician leads people to go to the emergency room for non-urgent care [2].

Access within 48 hours to initial screening for mental health services

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
46%	23%	8%	68%	46%	70%	57%

Results vary from 8% (Zone 3) to 70% (Zone 6)
(Difference of 62 percentage points)

The initial screening helps alert staff on the appropriate mental health service level for follow-up based on the clinical symptoms an individual is exhibiting. How does poor access to initial screening influence the health outcomes of citizens?

Patients who received hip replacement surgery within 26 weeks

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
52%	72%	81%	93%	39%	86%	100%

Results vary from 39% (Zone 5) to 100% (Zone 7)
(Difference of 61 percentage points)

How do long waits for hip replacement surgery affect the pain, disability and rehabilitation level of citizens [3]?

Care experience (satisfaction with overall health services)

Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7
71%	68%	62%	74%	60%	72%	69%

Results vary from 60% (Zone 5) to 74% (Zone 4)
(Difference of 14 percentage points)

Why do some citizens rate their overall health care experiences higher than in other zones?

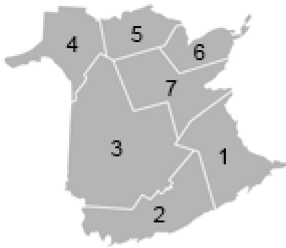
These are examples of indicators across the continuum of care. See Appendix A for more graphs on variability.

Learning opportunities

What we observe from analyzing the variability in health service quality is that while some zones in the province perform very poorly, others perform much better. Can we learn from those who perform better to bring up the quality of services where performance is poorer? For example, the graphs on the previous page raise the following questions:

- Can we learn from Zone 2 how to offer citizens more timely access to family doctors?
- Can we learn from Zone 6 how to offer more timely access to initial mental health screening?
- Can we learn from Zone 7 how to reduce wait times for hip replacement surgery?
- Can we know what Zone 4 does to offer better overall health care experiences?

WHAT ARE THE SEVEN HEALTH ZONES?
New Brunswick is divided up in seven health zones for the delivery and administration of health services.



1) Moncton and South-East Area (population: 203,840) - Horizon and Vitalité
2) Fundy Shore and Saint John Area (population: 175,060) - Horizon
3) Fredericton and River Valley Area (population: 173,875) - Horizon
4) Madawaska and North-West Area (population: 49,000) - Vitalité
5) Restigouche Area (population: 26,920) - Vitalité
6) Bathurst and Acadian Peninsula Area (population: 77,795) - Vitalité
7) Miramichi Area (population: 44,690) – Horizon

(Population estimates are from Statistics Canada's 2011 Census)

Improving performance: The need for an effective provincial accountability framework

In order to guide the province toward better overall performance, an effective accountability framework must be put in place.

In dialogue sessions that the NBHC has conducted over the years [4], citizens have shared their belief that the health system has some form of accountability structure to ensure that priorities are responded to and progress is made. As the NBHC has previously reported, the reality is not as citizens believe: in fact, New Brunswick doesn't currently have an effective accountability framework to help standardize and improve the quality of health services.

What citizens have told us

- They believe the data gathered by the system helps support planning and set priorities.
- They expect the health system to be well integrated and focused on their journey across all programs and services.
- They believe that health services are designed to meet their needs.
- They believe that health system leaders plan and make decisions based on evidence.

Legislative obligation to form an accountability framework

Forming an accountability framework is a legislative obligation written in New Brunswick's *Regional Health Authorities Act* as follows [5]:

> "The Minister shall establish an accountability framework that describes the roles of the Minister and other government ministers and the regional health authorities and that specifies the responsibilities each has towards the other within the provincial health system."

The act also states that "the Minister may establish performance targets for a regional health authority" with respect to financial management, access to health services, satisfactory health outcomes, and patient satisfaction.

A system that has an accountability framework: Ontario

Provinces that have an accountability framework - such as Ontario – appear to be stronger performers with respect to health service quality and population health outcomes. In Ontario, there is accountability funding agreements from the Minister to each Local Health Integration Network that sets out performance goals and standards, reporting requirements, a spending plan and a performance management process.

Benchmarking and performance targets

An accountability framework can take different forms and contain different components. One of the key elements has to do with benchmarking and setting performance targets to measure and monitor performance goals.

While the necessary standardized data to set benchmarks and performance targets has historically been missing in New Brunswick, the NBHC has in the past few years collaborated with various health system stakeholders to collect provincial, zone-level and community-level data to produce tools that show the quality of health services (and population health outcomes). Such tools include the Health System Report Card, the Population Health Snapshot and the My Community at a Glance community profiles.

Even if these tools are not perfect and can certainly be improved, they are seen as credible by the health system and shine light on priority areas. As a province, we have made a lot of progress when it comes to having access to standardized data. The information in the NBHC's tools is a good starting point for benchmarking and setting performance targets.

As it stands today, most parts of the health system are not well integrated, which impacts people's care and appropriate utilization of health services. A culture shift towards performance management and accountability focused on the quality of the care experienced by citizens is needed to support an integrated health services delivery system. This first requires that health system leaders and planners accept the main responsibility for creating and supporting the environment that will enable this cultural shift to occur.

Priority areas and where to focus

Priority areas: primary health services and mental health and addiction services

Since 2010, primary health services have consistently received the lowest overall performance grade in the NBHC's annual Health System Report Card, indicating they are the weakest link in New Brunswick's publicly funded health services. Additionally, the 2014 edition of the Health System Report Card shows that mental health and addiction services have also joined primary health services as a weak link.

For citizens, depending on the reasons for needing health services, the poor performances in these two areas can lead to significant negative consequences. These two areas reach a big proportion of the population; approximately 90% of New Brunswickers use primary health services each year and approximately 40% use mental health and addiction services [6].

What are primary health services?

Primary health services are broadly defined as the services provided at the first point of contact with the health system, such as with personal family doctors, nurse practitioners, community health centres and afterhours clinics. Primary health services include routine care, care for urgent but minor or common health problems, maternity and child care, health promotion and disease prevention, and nutrition counseling. Within a given year, over 90% of citizens receive some form of primary health service.

Focus: accessibility and appropriateness

Since 2009, the NBHC has been working on identifying health system performance measures together with stakeholders and citizens. In order to report publicly on health service quality, the NBHC must consider its six dimensions of quality: accessibility, appropriateness, effectiveness, efficiency, equity, and safety (see page 1).

At the citizen engagement initiatives conducted by the NBHC in the province in the past five years [4], the issues most commonly raised by citizens were either related to **accessibility** or **appropriateness**. For these citizens, having services that are accessible and appropriate can have an important impact on their level of health (which in turn contributes to the increase or decrease in costs to the health system).

Additionally, research shows that a focus on these two dimensions of quality can improve the effectiveness, efficiency and safety quality dimensions [7]. As for the equity dimension, addressing the variability in health services in all dimensions of quality has the potential to lead to the ability to provide quality care/service to all, regardless of individual characteristics and circumstances.

Viewed in this way, focusing on improving the accessibility and appropriateness dimensions of quality, particularly for primary health and mental health and addiction services, has the capacity to support health service transformation in New Brunswick.

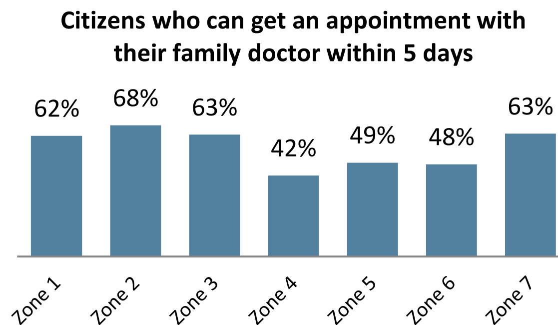
Five criteria for accessibility and appropriateness

One way to know if a decision helps improve accessibility and appropriateness is to test it against the following five criteria: right patient, right provider, right care, right time, right venue. If every encounter in the health system (i.e. a visit to a primary care provider, a hospitalization, home care) met each of these five criteria, then optimal care and value will have been provided [8].

Right patient	Right provider	Right care	Right time	Right venue
Are care choices matched to individual patient characteristics and preferences?	Does the scope of practice meet the needs to deliver care?	Is the care evidence-based?	Is the care delivered in a timely manner based on agreed upon performance targets?	Is the setting suited to provide safe and efficient delivery of care?

What is the acceptable wait time to see one's family doctor?

The indicators on page 3 are examples of indicators under primary health and mental health or under the accessibility and appropriateness dimensions of quality. The indicator on the ability to see one's family doctor within five days is reproduced below.



This is one of many measures for which there are currently no performance targets. What should the system aim for as the acceptable wait time to see one's family doctor? Is it three days? Four days? Five days?

From a benchmarking perspective, we see a variation from 42% to 68% in citizens who can get an appointment with their family doctor within five days. We need to explore and understand the factors - such as resource levels or scheduling practices - that can influence these variations. What are the factors that lead to better accessibility to one's family doctor in zones 1, 2, 3 and 7? What are the factors that play against accessibility to one's family doctor in zones 4, 5 and 6?

From the perspective of setting performance targets, an effective accountability framework would then set what the performance target is (for example, 5 days) and identify how performance will be measured and reported publicly.

Conclusion

New Brunswick can improve the quality of its publicly funded health services and ensure that the needs and expectations of citizens are met in a standardized way across the province. This will require a significant shift in the design and delivery of programs and services and holding organizations accountable for legislative requirements.

Although the information provided by the NBHC has been widely recognized as valuable, it is only slowly being incorporated in the health services planning process. For the majority of health services managers, at all levels of health system organizations, access to standardized provincial health service quality measures has not been part of their working environment for accountability and decision-making. The lack of an accountability framework can serve as a quick explanation as to why such measures are not properly leveraged in planning and monitoring tools.

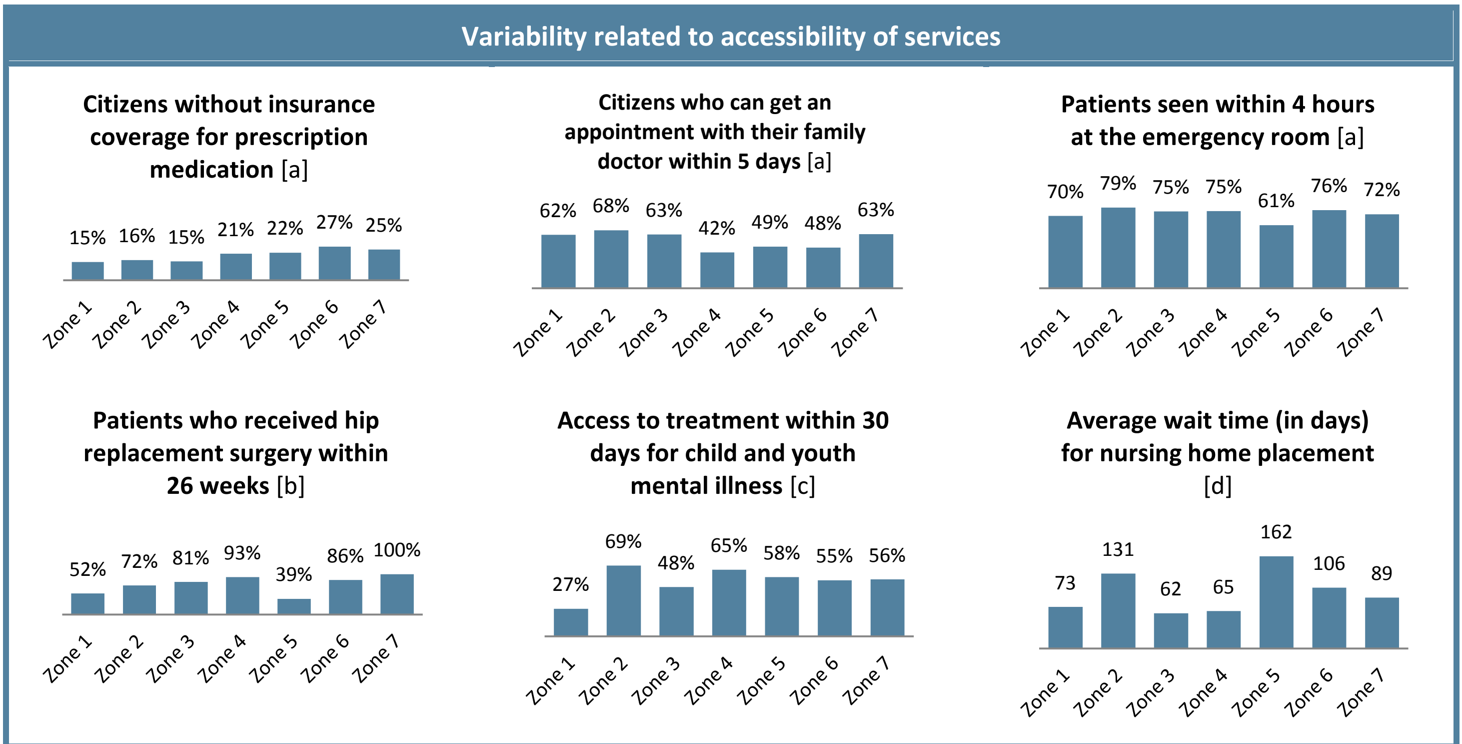
To address the variability issue in health service quality and ensure that more and more geographic areas in the province can perform as well as the higher performers, benchmarking must be done and performance targets must be set. A starting point for benchmarking and performance targets could be for primary health and mental health and addiction services measures, with a focus on the measures related to accessibility and appropriateness. Starting with these elements would represent key strategic opportunities for the transformation of the New Brunswick health system.

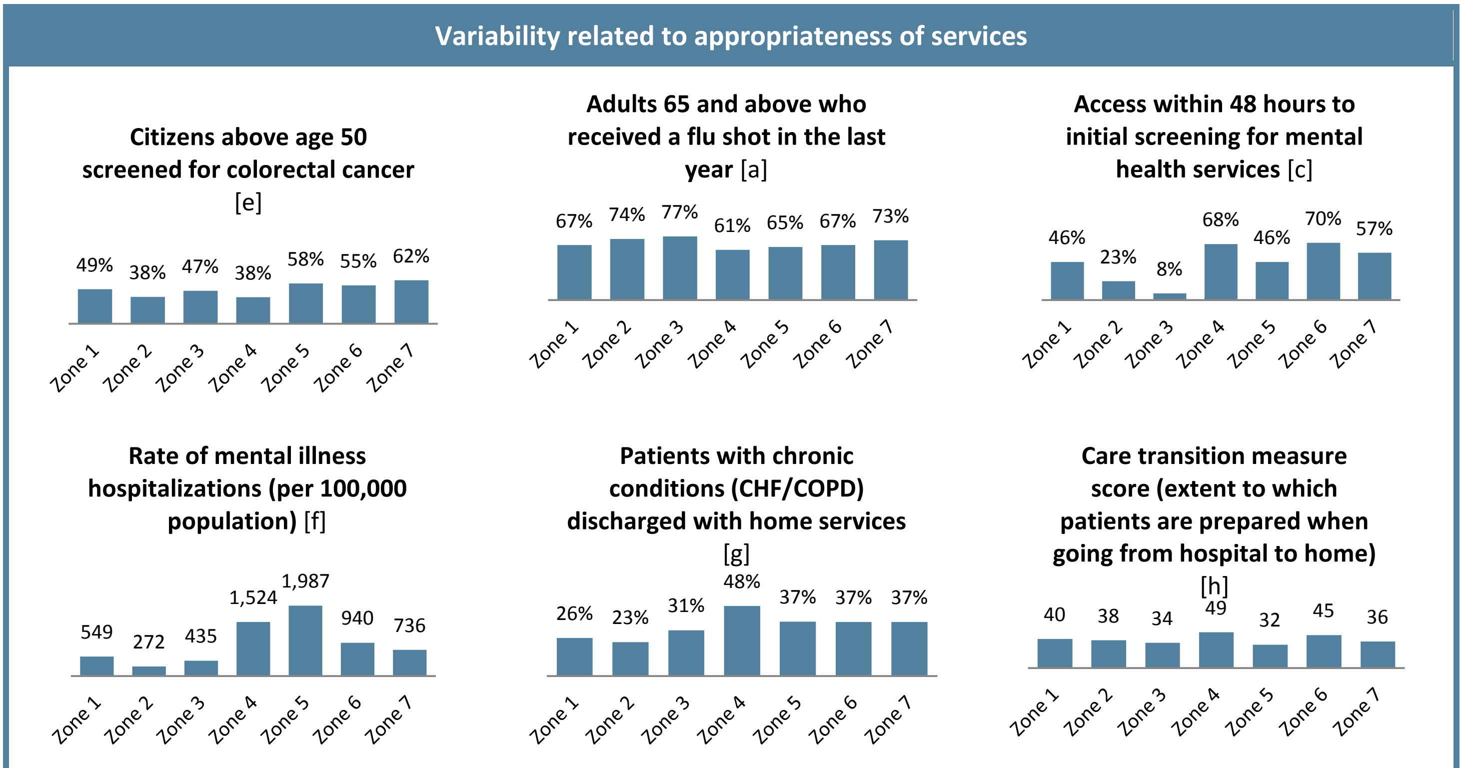
While challenges remain, when combining the progress the province has made in identifying health service quality measures with the relatively small size of the provincial health system compared to other provinces, New Brunswick seems well positioned to lead the country in health service quality improvements.

Available data

For more data related to health service quality, see our Data section at www.nbhc.ca/data and our Health System Report Card at www.nbhc.ca/health-system-report-card.

Appendix A - Variability in health service quality





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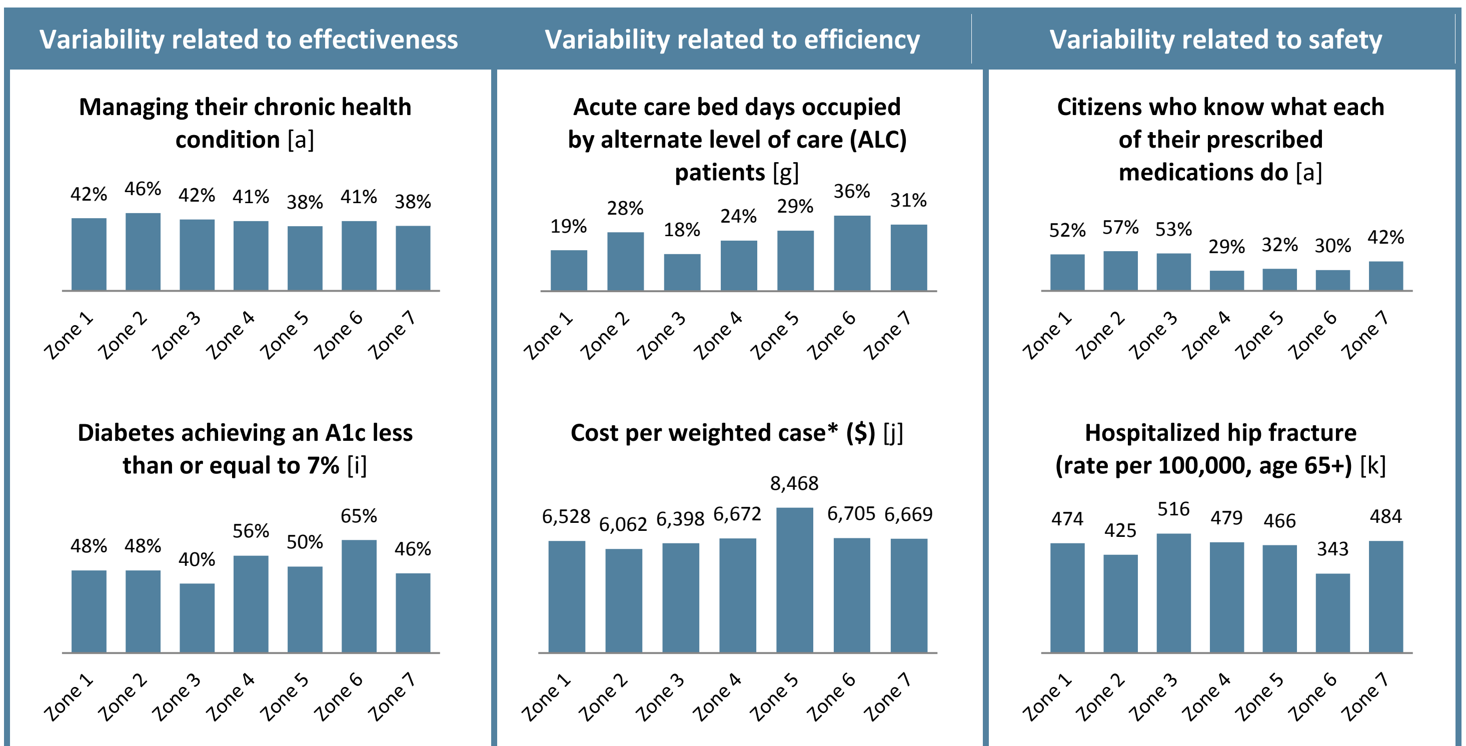

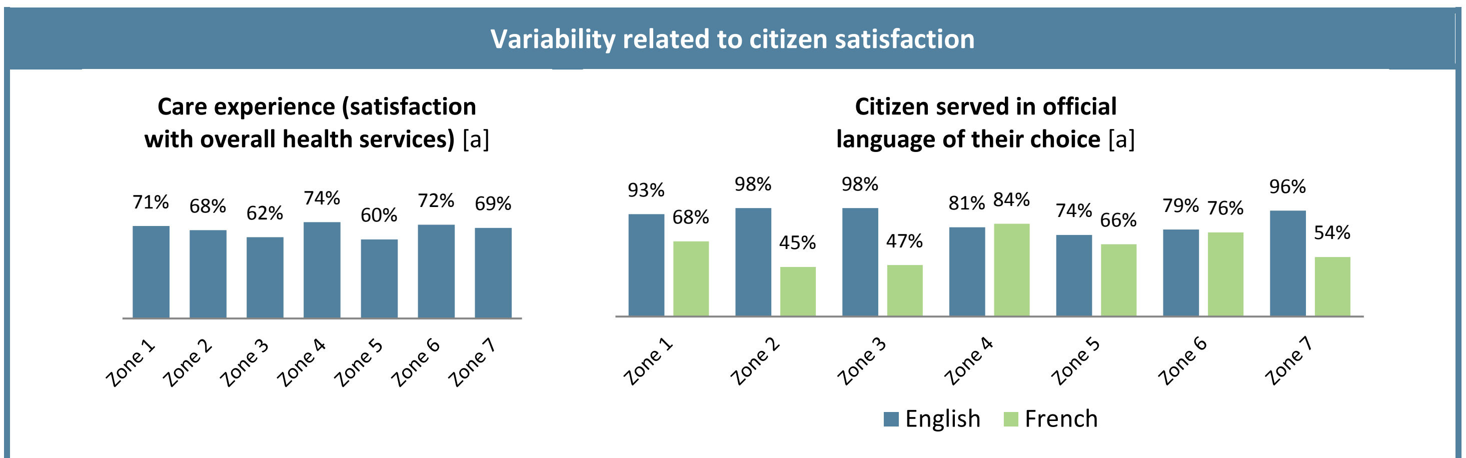

* Cost per weighted case: As defined by the Canadian Institute for Health Information (CIHI), this indicator measures the ratio of a hospital's total acute inpatient care expenses to the number of acute inpatient weighted cases related to the inpatients for which the hospital provided care.

a. NBHC, Primary Health Survey 2014
b. Department of Health, Annual Report of Hospital Services, 2013-2014
c. Department of Health, Mental Health CSDS, 2013-2014
d. Department of Social Development, 2013-2014
e. Department of Health, Canadian Community Health Survey, 2014
f. Canadian Institute of Health Information, 2013-2014
g. Department of Health, Discharge Abstract Database, 2013-2014
h. NBHC, Hospital Care Experience in New Brunswick, 2013
i. Department of Health, Diabetes Registry, 2012
j. Canadian Institute of Health Information, Hospital Financial Performance Indicators, 2013-2014
k. Canadian Institute of Health Information, 2012-2013

References

[1] S. Wong, D. Watson, E. Young and S. Regan, "What do people think is important about primary healthcare?," *Healthcare Policy,* pp. 89-104, 2008.

[2] K. Rose, J. S. Ross and L. I. Horwitz, "Advanced Access Scheduling Outcomes: A Systematic Review," July 2011. [Online]. Available: doi:10.1001/archinternmed.2011.168.

[3] I. Vergara, A. Bilbao, N. Gonzalez, A. Escobar and J. Quintana, "Factors and Consequences of Waiting Times for Total Hip Arthroplasty," 2011. [Online].

[4] New Brunswick Health Council, "Our Health. Our Perspectives. Our Solutions. Results of our First Engagement Initiative with New Brunwick Citizens," 2010. [Online]. Available: http://www.nbhc.ca/sites/default/files/our_health_our_perspectives_our_solutions_-_results.pdf.

[5] Government of New Brunswick, "Regional Health Authorities Act," 2002. [Online]. Available: https://www.gnb.ca/legis/bill/editform-e.asp?ID=81&legi=54&num=4.

[6] New Brunswick Health Council, "New Brunswickers' Experiences With Primary Health Services," 2014. [Online]. Available: http://www.nbhc.ca/sites/default/files/primary_health_survey_-_complete_report.pdf.

[7] J. Lavis and G. Anderson, "Appropriateness in health care delivery: definitions, measurement and policy implications," *Canadian Medical Association Journal,* vol. 154, no. 3, pp. 321-328, 1996.

[8] Canadian Medical Association, "Appropriateness in Health Care," 2014. [Online]. Available: http://policybase.cma.ca/dbtw-wpd/Policypdf/PD15-05.pdf.