



New Brunswick Health System Report Card 2012



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

Engage. Evaluate. Inform. Recommend.
Engager. Évaluer. Informer. Recommander.

About us:

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 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 health system partners.

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Executive Summary

The New Brunswick Health Council (NBHC) is proud to deliver its third *New Brunswick Health System Report Card* as part of our commitment to providing the citizens of New Brunswick with important information about the quality of health services being delivered in the province.

The third *New Brunswick Health System Report Card* is an attempt to provide an update on the first two health system report cards which were used for measuring, monitoring and evaluating changes to the quality of health services and to assist with recommendations for improvements, some of which can be found in a document we released in 2011: **“Recommendations to the New Brunswick Minister of Health, Moving towards a planned and citizen-centered publicly funded health care system** (NBHC, 2011).”

The current report card has gone through a few enhancements while continuing to ensure that the citizen or patient remains the center of focus for improvement in health services’ quality as they must navigate through the health care system for effective management of their health. These changes include additions of some indicators for which measures were not available in the last report card, in addition to the introduction of indicators reflective of the extent that home care services are equitably delivered. Details of the complete care experienced by New Brunswickers can be found in the results of our “2012 Home Care survey”, published in October. Most of the indicators chosen and used in the report card are based on high-cost or high-volume program and service areas and are chosen based on their ability to reflect all sectors of care: Primary Health, Acute Care and Supportive/Specialty (commonly known as “Continuing Care”). In addition, the “Safety” dimension was improved by adding some indicators that were standardized between the 2 Regional Health Authorities (RHAs) during the past year.

This report tries to draw links between the performance of the health system in the province, the incurred costs, and the ultimate population health outcomes. To best explain health outcomes, the concept of **“Potentially avoidable mortality”** will be introduced, as defined by the Canadian Institute of Health Information (CIHI) to be premature deaths (i.e. untimely deaths for people less than 75 years of age that should not occur in the presence of timely and effective health care, including prevention and treatment). As per the definition, avoidable mortality is a function of access to (timely) and effective health care services; two dimensions of quality that vary based on different health care sectors and geographic regions. “To make the measure of avoidable mortality more actionable for policy-makers and health care system managers and decision makers, the Canadian indicator of avoidable mortality was divided into mortality from preventable causes, which will inform primary prevention efforts, and mortality from treatable causes, which will inform efforts for case fatality reduction (Refer to Appendix for details). The *Health System Report Card 2012* introduces this new concept as an ultimate population health outcome and highlights the contribution of the health system to preventable and treatable mortality, linking health outcomes and health system performance to sustainability. The NBHC plans

to elaborate on this concept with the next report on Population Health Snapshot 2012 (to be released early 2013) which will focus on the “Preventable avoidable mortality” to shed more light on the role of the citizen in controlling his/her lifestyle and thus strengthening the prevention component in population health.

THE ROAD TO SUSTAINABILITY:

The publicly funded health care system in New Brunswick is under increasing pressure as a result of escalating costs, an aging population, and an overall economic downturn resulting in a need for further cost reductions. However, the challenge of delivering high-quality care to all New Brunswickers remains critically important. In order to meet the needs of the population, the adoption of evidence-based practices is essential in our health care system to improve outcomes, minimize/control costs and deliver patient centered health care that is seamless/integrated for the individual. This is a pre-requisite to a health system that is sustainable for future generations.

The key function of a health system is to provide **quality health care** that positively contributes to **population health** outcomes in a **sustainable** and efficient manner. Health care services provided across the different sectors (primary, acute, supportive/specialty, etc.) work to improve health outcomes through prevention (minimizing the demand for health care services), and treatment (through intervention or curative services to treat adverse health conditions be it chronic or acute).

It has been shown through many reports and research that acute health care services are more expensive than primary care services; therefore, sustainability in health care lies in reducing the need for acute/advanced services that require more expensive and sophisticated technologies and treatments, while ensuring the efficiency of the services provided by making the best use of the resources available. In other words, a cultural shift towards prevention and efficiency can provide the opportunity for better health system performance.

Accordingly, the inter-relationship and balance between the 3 aims of the health system: (1) Health care experience, (2) population health, and (3) Cost may predict the sustainability of the health system; a health system that can continue to afford providing good quality services to achieve better health outcomes for the *future* generations to come.

Population Health Outcomes in New Brunswick:

The highest system level population health outcomes are generally complex to capture and measure. Some composite indices have been developed (e.g. Quality Adjusted Life Years/ QALYs and Disability Adjusted Life Years/DALYs) to provide single measures of health outcomes. Morbidity (illness) and mortality (fatality/death) represent the major 2 components of population health outcomes, and a proxy that can and has been used to measure the latter would be the potential years of life lost due to premature mortality (i.e. the mortality in ages below 75 years old). Potential Years of Life Lost is a unit of measurement that describes the outcome of premature mortality, and transforms it into the years of life a population loses on average as a result of more people dying at a younger age. In other words, the more people less than 75 years of age, and/or the younger people in a population die, the more the years of life that population loses.

New Brunswickers potentially lose **4,850 Years of Life/100,000 of the population** due to premature mortality, which is above the Canadian average, ranking 6 out of 10, and 72% of that premature mortality is avoidable (i.e. “Avoidable mortality refers to untimely deaths that should not occur in the presence of timely and effective health care or other public health practices, programs and policy interventions”¹). This included both treatable and preventable mortality. Out of the potentially avoidable mortality, 32% (1,108 PYLL/100,000) could have been avoided by proper treatment of the illness reducing the fatality of the condition, leaving 68% of the Years of life lost (2,393 PYLL/100,000), that could have been avoided by prevention (i.e. reduction of the incidence of the illness) (Figure1).

When compared to the rest of Canada, New Brunswick seems to be worse in provincial ranking for the rate of preventable mortality (ranking 7th out of 10), while being better than the Canadian average in treatable mortality (ranking 2nd out of 10).

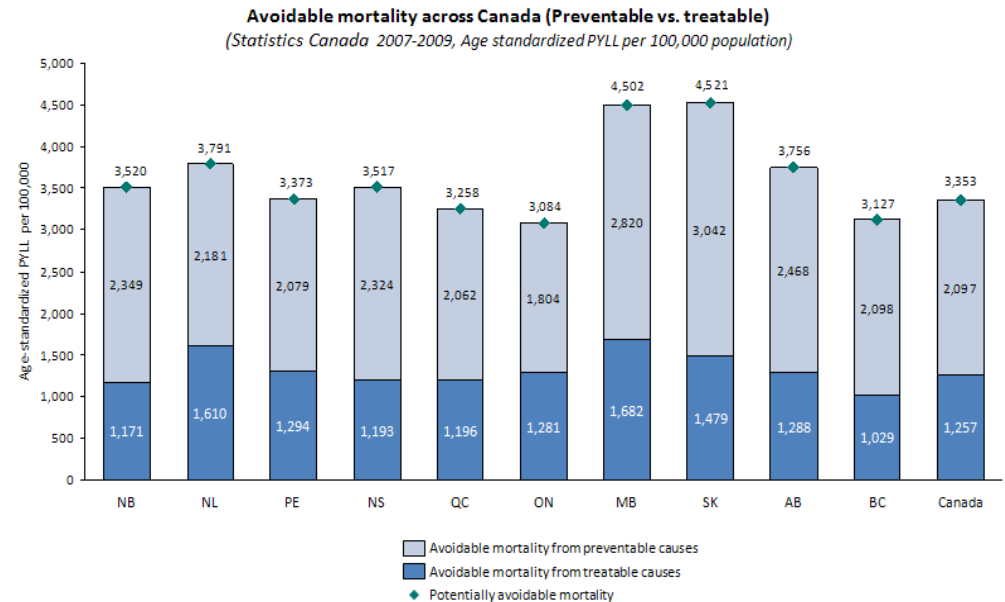


Figure 1: Avoidable mortality across Canada (Preventable vs. treatable).

Note: Any discrepancy between the values published by Statistics Canada and those published in CIHI's "Health Indicators 2012" report is attributed to the utilization of the most recent update of the population estimates

¹ CIHI (2012). Health Indicators 2012 report.

This points to a better health care performance in response to health conditions requiring treatment, yet a major weakness for prevention and its capacity to protect New Brunswickers' population health and well-being and reduce the demand for curative services.

“Once a person is sick, we do well in treating him/her, but what are we doing to prevent him/her from getting sick in the first place??”

Looking at other provinces, Ontario & British Columbia top the list in best health outcomes in terms of the lowest premature avoidable mortality rates (Figure 1).

Zooming geographically to the health regions in New Brunswick, the variability noted among provinces is also noted regionally. Health outcomes for zone 6 demonstrate lower rates of avoidable mortality PYLL rates (in both preventable and treatable mortality) as compared to other regions (zones 4, 5 & 7) (Figure 2), while zones 1, 2 and 3 are similar to the national average.

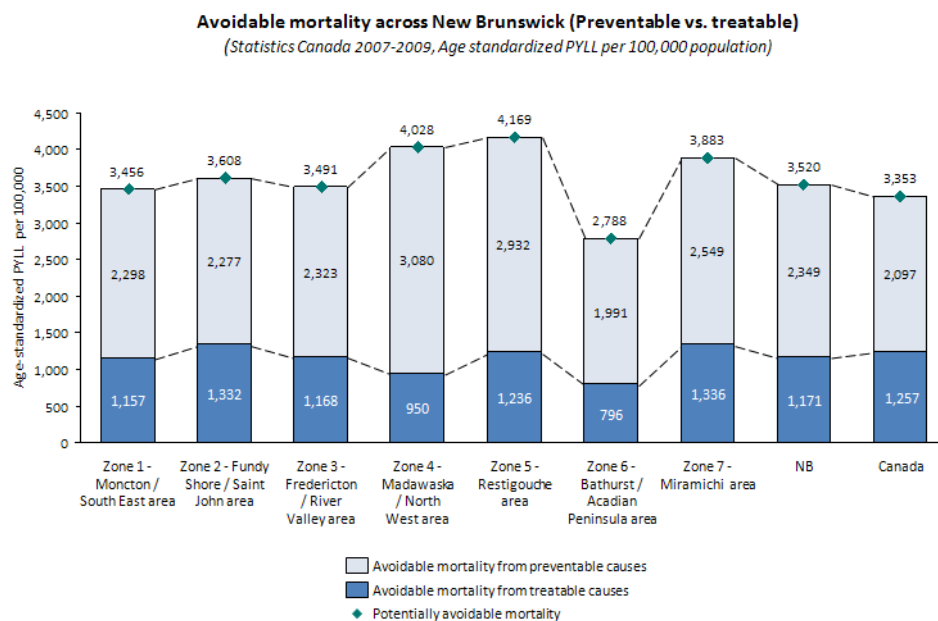


Figure 2: Avoidable mortality across New Brunswick (Preventable vs. Treatable)

The Context

The demographic context and determinants (behavioural, socio economic, environmental, etc.) in a population represent the drivers of the health burden it carries, and accordingly of the demand/pressure exerted on the health system that has to provide/supply the necessary services to prevent or treat in order to maintain population health (by reducing morbidity and premature and avoidable mortality), and that certainly comes with a cost. A balance between supply (distribution, quality and efficiency of services) and controlling demand (population health burden) is hence key to a sustainable health system. The sicker the population, the more services it needs; and as good quality services require resources, this implies higher cost and spending.

Despite the increasing investments in the New Brunswick health system, the prevalence of chronic health conditions continues to be on the rise (Figure 3).

The aging population certainly contributes to this increase, and coupled with the prevalence of unhealthy lifestyles behaviours in New Brunswick's population exerts an even higher demand and financial burden to the health system. We exercise less, eat less healthy, drink more alcohol, smoke more, and are more obese than the average Canadian. Accordingly, the investment or restructuring in how New Brunswick delivers its services has not achieved the level of success in curbing the rates of unhealthy lifestyles, and the progression of the rate and number of chronic health conditions.

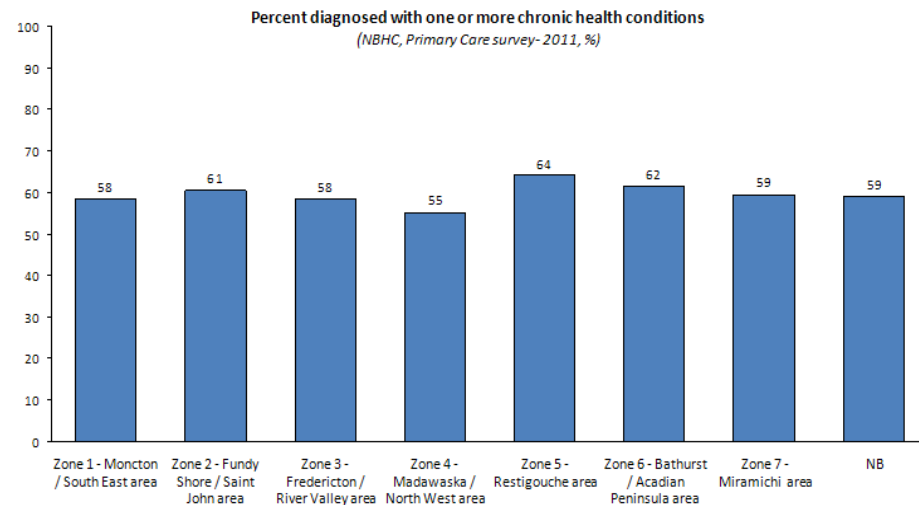


Figure 3: Percent diagnosed with one or more chronic health conditions

Quality of health care services and health system performance in New Brunswick

According to this third *Health System Report Card* issued by the New Brunswick Health Council, there has been no change in the overall quality grade for the health system in New Brunswick.

In the absence of provincial targets that New Brunswick can benchmark against, the applied grading methodology compares New Brunswick's performance to the highest possible value achieved by any other province. Ultimately, New Brunswick will benefit from the development of targets and benchmarks that are evidence based and that can guide the achievement of better health outcomes.

Having a closer look at the trends in performance over the past 3 years (the 3 published report cards), instability/inconsistency in performance (an up and down trend) prevails across the different sectors and quality dimensions.

Despite progress on some dimensions and in some sectors like appropriateness in acute and supportive/specialized care (e.g. a lower hospitalization rate of mental health conditions, a lower rate of hysterectomy, and quicker screening assessment rates for mental health clients within 48 hours), and effectiveness in supportive/specialized care (e.g. Higher Electronic Medical Record Adoption Model Score, fewer patients being repeatedly hospitalized for mental health, and fewer hospitalizations for self-injury), there was a regression in certain aspects of care such as wait time for certain surgeries, and lack of progress in others like the percentage of Alternate Level of Care (ALC) days. In addition, the primary care sector as a whole appears to be struggling in all dimensions of care, as compared to the acute care sector and the supportive/specialty care sector which received a "B" Grade this year.

These trends help to support our observations that New Brunswick is better with treatable than preventable care and outcomes.

Health costs in New Brunswick

Health costs are growing all around the globe, and in that New Brunswick is no exception. However, the rate of growth, when put in perspective (i.e. population growth, economic growth, etc.) highlights an unsustainable trend driven by the health burden of the ageing population.

Between the year 2004 and 2009, public sector health expenditure² in New Brunswick increased by \$1,150.9 billion (54.4% growth from \$2,115.3 billion to \$3,266.2 billion).

In 2009, on average, \$4,006 was spent per New Brunswicker (when standardized by age and sex –for national comparison- the cost per capita drops to \$3,790), while the health system still scored a “C” grade for the overall performance, with relatively better treatable than preventable health outcomes (Figure 4).

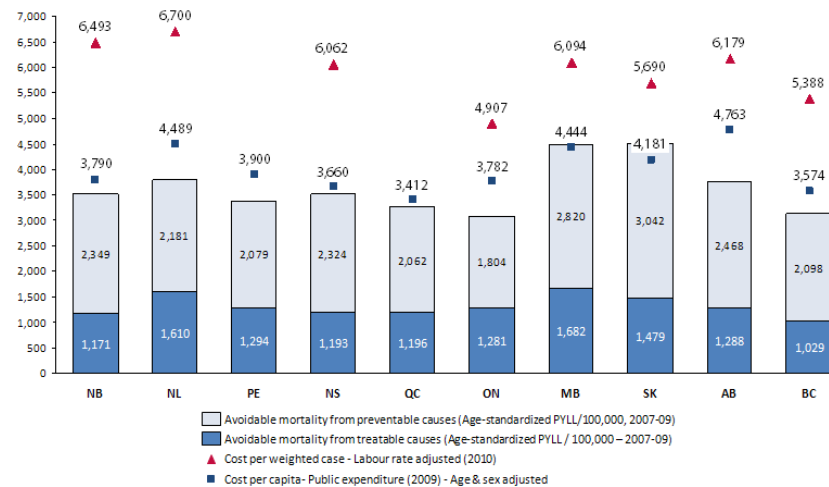


Figure 4: Comparison of health cost and health outcomes indicators across Canada.

Source: CIHI 2012. Canadian Hospital Reporting Project database + CIHI 2011 NHEX tables + Statistics Canada CANSIM 102-4311

Almost 46% of New Brunswick’s per capita cost is spent on hospitals, as compared to only 35% in Ontario (Refer to Box 1). However, Ontario seems to be spending more on physicians (22% of per capita cost vs. 18% in New Brunswick) and almost double on public health (9% vs. 5% in New Brunswick). Despite similar public cost per capita health spending, Ontario achieved an “A” in health system performance (when using the New Brunswick health system report card methodology), as compared to a “C” for New Brunswick last year, as well as this year. So, how does Ontario do it? How can they achieve better health outcomes, with a better health system performance, and yet spend the same per population?

² Canadian Institute for Health Information (CIHI) (2011 NHEX tables). Series B: Public Sector Health Expenditure, by Province/Territory and Canada, 1975 to 2011—Current Dollars

This fact can be explained by a number of factors such as: (1) economies of scale, (2) strong monitoring and quality accountability frameworks, and (3) stronger public health surveillance systems, strategies, and investments. The trend towards more acute care/hospital focus in New Brunswick reduces the availability of investments in primary care and prevention or supportive/specialty, or “continuing care”. This trend has the potential to drain the provincial government budget as it reacts to the demands of the health system.

It is expected that health spending increases with an aging population, which is demonstrated in figure 5. When comparing the cost per capita by age group in New Brunswick and Ontario, with the exception of children up to 10 years of age, New Brunswick clearly shows a similar trend of spending per person at every age group. The cost per capita in New Brunswick only starts to exceed Ontario’s and Canada’s average after 70 years of age where the gap widens, with an almost \$4,000 difference per person after the age of 90.

The fact that New Brunswick spends more per capita at older age highlights a potential need for intervention to improve efficiency in the system, especially at the level of services the seniors receive in the acute care, home care, and long-term care sectors. Moreover, the fact that cost per capita starts escalating above the Canadian average at a relatively younger age (70 years) might potentially indicate a need for better prevention to reduce the burden of chronic health conditions, which normally aggravates with age.

Exploring the health spending profiles across Canada and in New Brunswick and comparing it to ultimate health outcomes simply shows that spending more on health care does not necessarily mean achieving better health outcomes. In fact health costs seem to be driven by the lifestyle and health status context of the population, with poorer population health leading to higher spending. It is the approach to health spending and the strategic

**Total Provincial/Territorial Government Health Expenditures by Age
(Cost per Capita, 2010)**

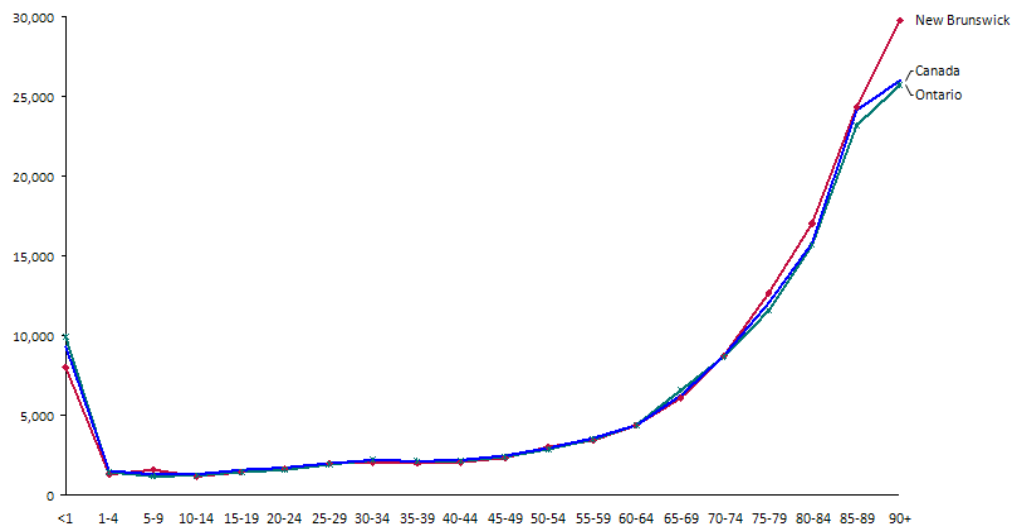


Figure 5: Comparison of total provincial/territorial government health expenditures by age group for New Brunswick, Ontario and Canada
Source: CIHI 2012 NHEX tables

alignment of resources which can break the vicious unsustainable cycle of (1) less primary care and prevention, (2) more health problems, (3) expensive hospital based care, technologically advanced and drug treatment spending, and (4) less efficient systems.

Conclusion (What's Next?)

Sustainability of health care is presenting high on the agenda of policy makers across the government in New Brunswick. Controlling the public sector health expenditure, by curbing the growth of and ultimately reducing the cost per capita to match the national average is perceived as a solution to the escalating health care cost. However, identifying the areas of intervention requires careful consideration of spending by age group which indicates a cost per capita that is below or close to the national average for adolescents and adults up to the age of 70, after which spending per person escalates above the national average. This observation highlights the need for a customized approach to curbing health spending, by improving the efficiency in health services provided to the elderly (in health care or non health care setups), coupled with better allocation of resources to strengthen prevention for younger age groups, thus reducing the burden of disease later in life.

In 2011, NBHC published the “Recommendations to the New Brunswick Health Minister, Moving towards a planned and citizen-centered publicly funded health care system”, highlighting necessary areas of intervention to start achieving sustainability³. They were as follows:

RECOMMENDATION #1

The Government of New Brunswick, through the Department of Health, take steps to develop, within the next twelve month period, a multi-year comprehensive and integrated health services plan for the province. The plan should outline the following: measurable desired health outcomes; measurable service targets (range and volume of services); standards for the level and quality of services; financial and human resources (inputs) required to achieve service targets and the geographical and linguistic allocation of services and resources.

RECOMMENDATION #2

The Government of New Brunswick, through the Department of Health, review the organization and delivery of primary health care in the province with a view to maximizing the utilization of existing human and financial resources. This review should focus on ways to improve access to care and quality of care, as well as integration with other health services programs, namely hospital services.

³ New Brunswick Health Council, Recommendations to the New Brunswick Health Minister, Moving towards a planned and citizen-centered publicly funded health care system (NBHC, 2011).

RECOMMENDATION #3

The Government of New Brunswick, through the Department of Health, ensure that a concerted strategy is developed to improve health promotion and disease prevention in the province. This strategy should consider the determinants of health, and focus first on four key areas: achieving healthy weights, lowering high blood pressure rates, improving mental health and preventing injuries. The strategy must identify the organization responsible for the coordination of the work with related stakeholders for an integrated execution of the initiatives undertaken.

BOX1: New Brunswick vs. Ontario .. Key observations

An exercise was undertaken to apply New Brunswick's system of performance grading to Ontario's health system performance 2011. Accordingly Ontario achieved an "A" grade as compared to New Brunswick which achieved a "C" grade last year as well as this year.

Ontario was leading in appropriateness, efficiency and safety (all scoring an A), in addition to scoring better on effectiveness (B), and equally fairing in Accessibility (B).

In addition to better health system performance, Ontario seems to have generally better health outcomes as it has higher rates of self rated health and mental health, and it loses fewer years of life per population to avoidable mortality. Ontario seems to be losing fewer years of life due to preventable mortality, whereas New Brunswick loses fewer years to treatable mortality, potentially signaling stronger prevention services in Ontario. This is possibly demonstrated by the actual relatively better lifestyles and behaviours that Ontarians adopt as compared to New Brunswickers.

Does that come at a high cost? In observing the cost indicators for both provinces, Ontario shows a lower cost per weighted case than New Brunswick, and a slightly lower age and sex adjusted per capita cost with significantly less percentage spending on hospitals, and more on physicians, drugs and public health.

Therefore, Ontario seems to be providing an interesting model of health care provision. They score some of the best values on performance indicators (as compared to other provinces), and show better health outcomes and behavioural risk factors, coupled with better alignment of public sector resources.

A possible argument could be that New Brunswick has to pay more because it needs to treat it's generally sicker and older population. This is in fact true if we restrict addressing population health as only a source of demand. However, this demand is also a result of the lack of appreciation of the role of prevention in improving population health and reducing demand. Delivery of programs and services across the health system needs to be re-aligned to strike a balance in preventing people from getting sick (i.e. reducing demand) and treating those who get sick.

Source:

1. CIHI 2012. Health indicators report
2. Statistics Canada. Canadian Community Health survey 2010
3. CIHI 2010. Canadian Hospital Reporting Project.
4. CIHI 2011. NHEx tables. Public Sector Health Expenditure, by Province/Territory and Canada, 1975 to 2011—Current Dollars

	New Brunswick		Ontario	
Health system performance (2011)	NB (C)		ON (A)	
Accessibility	B		B	
Appropriateness	D		A	
Effectiveness	C		B	
Efficiency	D		A	
Safety	C		A	
Population Health outcomes				
Potentially avoidable mortality ¹ (Age-standardized PYLL per 100,000, 2006-2008)	3,502		3,159	
Avoidable mortality from preventable causes ² (Age-standardized PYLL per 100,000, 2006-2008)	2,393		1,851	
Avoidable mortality from treatable causes ³ (Age-standardized PYLL per 100,000, 2006-2008)	1,108		1,308	
Perceived health very good or excellent ⁴ (% , 2010)	53.5		60.9	
Perceived mental health very good or excellent ⁵ (% , 2010)	68.3		74.5	
Health behaviours and lifestyle (context) (2010)				
Physical activity during free-time ⁶ (%)	52		50.4	
Eat 5 or more fruits or vegetables a day ⁷ (%)	37.5		42.8	
Adults with unhealthy weight (obese) ⁸ (%)	27.5		18.7	
5 or more drinks at one time, at least once a month in the past year (heavy drinking) ⁹ (%)	20.6		16.1	
Seeing your stress as being a lot ¹⁰ (%)	20.3		23.7	
Current smoker, daily or occasional ¹¹ (%)	22.5		19.3	
Health system cost				
Cost per Weighted Case-Labour rate adjusted ¹² (2010)	6,493		4,907	
Public Sector Health Expenditure ¹³ (cost per capita- Age and sex adjusted) -2009	3,790		3,782	
	\$4,006 (Actual)	%	\$3,749 (Actual)	%
Hospitals	1855.6	46.3	1295.4	34.6
Other Institutions	447.1	11.2	366.4	9.8
Physicians	704.7	17.6	832.7	22.2
Other Professionals	25.6	0.6	37.7	1.0
Drugs	270.3	6.8	354.8	9.5
Capital	102.8	2.6	229.5	6.1
Public Health	203.0	5.1	338.2	9.0
Administration	81.1	2.0	59.8	1.6
Other Health Spending	316.2	7.9	234.8	6.3

A REAL LIFE EXAMPLE

On August 3rd, 2012, Mr. X arrived at the Emergency Department (ED) doors with Congestive Heart Failure. He had not been taking his medication as prescribed due to affordability of medications and understanding of their proper use. He had been discharged 2 weeks earlier following Coronary Artery Bypass Graft (CABG) surgery and after a series of medical imaging tests to confirm the stability of his condition for discharge.

The decision for a CABG surgery had been made 2 months earlier as a result of a sudden heart attack that brought him to the ED at that time. In the ED they diagnosed him with high blood pressure, which was related to the headaches for which Mr. X could not get an appointment with his family doctor for appropriate care and treatment.

For the past 10 years, Mr. X (58 years old) had been gaining weight steadily, and had been smoking since the age of 30. He never had his blood pressure measured on a regular basis.

Mr. X passed away on his second ED visit, August 3rd, 2012. Approximately \$25,000 was the cost of the treatment and management of Mr. X in the past year (including the surgery, the sophisticated medical imaging tests, ED visit, and physicians cost).

This is only one possible story of a death following a series of health system encounters. Apparently, the patient received the effective treatment needed in an acute care facility delivering quality care, but many questions are to be raised:

- Did he receive care at the right time, right place, right provider?
- What or who could have helped him manage his medications?
- Were the medical procedures (surgery and imaging) enough to prevent his death?
- Why did he have to show up in the ED with a heart attack without a previous diagnosis for high blood pressure, and inability to access his family doctor in a timely manner?
- Why did he have to experience high blood pressure and cardiovascular problems in the first place? What could have been done to help him adopt better lifestyle habits such as quitting smoking and losing weight?
- Could early prevention and early diagnosis have saved him some years of life, and reduced the health care costs associated with his care

This story is an example of a **health outcome** (preventable death) that could have been avoided by appropriate health care services (**care experience and quality**) and consequently less health care spending (**Cost per capita**).

Introduction:





Just as student report cards provide parents with information on their child's performance, the New Brunswick Health Council (NBHC) is committed to providing the citizens of New Brunswick with important information about the quality of health services being delivered in the province.

The third *New Brunswick Health System Report Card* is an attempt to expand on the first two report cards of the health system which were used for measuring, monitoring and evaluating changes to health services over time and to assist with recommendations for improvements, some of which can be found in our most recent, **"Recommendations to the New Brunswick Health Minister, Moving towards a planned and citizen-centered publicly funded health care system (NBHC, 2011)."**

The 2012 *New Brunswick Health System Report Card* contains indicators of performance organized by sectors of care to highlight the importance of integrating programs and services. It also contains additional indicators to better reflect these programs and services that are being accessed by the citizens of New Brunswick. This is an effort to ensure that the citizen or patient remains the focus for improvement in health service quality as they must navigate through this health care system for effective management of their health.

The performance index grade compares New Brunswick's performance to the highest possible value achieved nationally. A performance index grade should not be viewed in isolation from indicators upon which it is based for any policy and/or planning decisions. The use of performance index grades provides the public an opportunity to obtain a sense of how the health system is performing in a holistic way.

In this complex system of programs and services, it is important that individuals or groups perform further analyses to obtain a more accurate picture of what is occurring and that they become informed about the quality of health care and health policies. Health indicators that are reported clearly and openly to the public helps patients, families and other citizens get involved in improving

New Brunswick Health System Report Card				
Quality Dimensions	Health Care Sectors			Performance Index Grade (by Quality Dimension)
	Primary Health	Acute Care	Supportive/ Specialty	
	 Primary Health <small>The care a person receives upon first contact with the health system, before referral elsewhere within the system.</small>	 Acute Care <small>Hospital based care.</small>	 Supportive/ Specialty <small>Care received in the community or as an outpatient.</small>	 Performance Index Grade (by Quality Dimension)
		Providing timely services		
		Relevant and evidence based		
		Doing what is required to achieve the best possible results		
		Making the best use of the resources		
		Keeping people safe		
		Aiming for equitable care and services for all		
Performance Index Grade (by Health Care Sector)				

the quality of health services⁴. It is also important to note that the data for the *safety dimension*, *equity dimension* and the *supportive/specialty sector* are being reported in the second and third report cards but were unavailable for the first report card due to lack of standardization of the measures during production of the first report. Although this report card is better balanced to reflect all dimensions of quality and sectors, there is still room for improvement.

Development of the *New Brunswick Health System Report Card*:

Performance measurement of the health system is extremely complex. For New Brunswick, it involves being able to measure, monitor and evaluate health services quality based on six dimensions of quality that the New Brunswick Health Council is required to report on. These dimensions of quality are: *Accessibility*, *Appropriateness*, *Effectiveness*, *Efficiency*, *Safety* and *Equity*.

In addition to these dimensions of quality, the council measures performance through the perspective of the citizen, this encourages integrated care across sectors. There are four sectors of care which make up the Health Care System⁵.

Dimensions of quality	Descriptor
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	The care/service, intervention or action achieves the desired results.
Efficiency	Achieving the desired results with the most cost-effective use of resources.
Safety	Potential risks of an intervention or the environment are avoided or minimized.
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.

⁴ Health Council of Canada, A Citizen's Guide to Health Indicators, A Reference Guide for Canadians January 2011 (2011), [online], from < http://www.healthcouncilcanada.ca/docs/rpts/2011/indicators/HCC_Indicators_Bookmark_Accessible.pdf >.

⁵ We continue to be challenged on identifying indicators which will effectively measure the quality of the "end-of-life/palliative care sector". Since most of the services and programs are delivered either through hospital services (acute care), the Extra-Mural Program (supportive/specialty) or in a long term care facility (supportive/specialty), the challenge is data capture. Therefore, we will remove this sector for public reporting of the grades



A *health care system or health system*, includes all individuals, institutions and resources involved in the prevention, treatment and management of injury, illness and disability and the preservation of mental and physical well-being through the services offered in the Province by medical and allied health professions. Health care is defined as the combined functioning of public health and personal medical services.

In order for the NBHC to support transformational change in the system, the current model or framework allows the organizations in the system to identify themselves with the indicators being measured and create focus around the importance of citizen-centred integrated care. Therefore, the NBHC chose to use *Accreditation Canada's sector divisions of care* and marry it with the dimensions of quality for the creation of the grid.

Extensive research was performed to ensure that both the definition of dimensions and sectors were aligned with regional, provincial/territorial, national and international standards. In the first year over 400 indicators were discovered (compiled from international, national and provincial bodies responsible for reporting on health care quality such as: WHO, UK, Australia, USA, Canada, Ontario, Saskatchewan and New Brunswick) but only 48 were used. This year there are 137 indicators. The expansion was based on stakeholder involvement requiring or requesting additional indicators and collective agreement through consultations for the majority of indicators selected. This approach facilitates the use of data for measuring and monitoring key programs and services.

The indicators chosen were based mainly on *outcome* and *system* level type indicators. These types of indicators are often strategic in nature and facilitate priority planning from a systems perspective. Most of the indicators were based on high-cost or high-volume program and service areas.

The indicators that the NBHC identified for use were those that were being collected from New Brunswick administrative databases and/or were available in the public domain: Canadian Institute for Health Information (CIHI), National Physician Survey, Statistics Canada and New Brunswick Department of Health.

The set of indicators were comprised of those that met our acceptable criteria list⁶, that is:

1. Relevant to the concerns of our main target audiences,
2. Easy to understand,
3. Reliable and valid,
4. Timely,
5. Easy to obtain and are periodically updated,
6. Obtained through an open, transparent and inclusive consultative review process, and
7. Able to contribute to a coherent and comprehensive view of health system performance in New Brunswick.

⁶ Accreditation Canada, [online], from <<http://www.accreditation.ca/>>.

The method chosen for public reporting was the use of a report card which contained performance index grades.

	# of indicators in 2010 Report Card (48 indicators)	# of indicators in 2011 Report Card (111 indicators)	# of indicators in 2012 Report Card (137 indicators)
Dimensions of Quality			
Accessibility	17	29	28
Appropriateness	11	15	16
Effectiveness	13	20	26
Efficiency	6	13	13
Safety	1	14	20
Equity	0	20	34
Sector of Care			
Primary Health	19	79	79
Acute Care	21	51	62
Supportive / Specialty	8	20	56
Palliative and End-of-life Care*	0	0	0

**We continue to be challenged on identifying indicators which will effectively measure the quality of the “end-of-life/palliative care sector”. Since most of the services and programs are delivered either through hospital services (acute care), the Extra-Mural Program (supportive/specialty) or in a long term care facility (supportive/specialty), the challenge is data capture. Therefore, we will remove this sector for public reporting of the grades.*

This report features the termination of 3 indicators due to unavailability from the source (Risk-adjusted rate of readmissions due to asthma, hysterectomy and prostatectomy), and the addition of 4 other readmission indicators for Pediatrics, medical, surgical, and obstetric). Another new indicator was an age-standardized average length of stay. Some indicators were moved to other quality dimensions after revisions and benchmarking. These include: Patients with repeat hospitalization for mental illness which moved within supportive/specialty care from appropriateness to Effectiveness; Proportion of mental health clients that had a screening assessment within 48 hours moving within

supportive/specialty care from accessibility to Appropriateness. In addition, acute care hospitalization rate for ambulatory care sensitive conditions was moved within primary care from efficiency to effectiveness.

Purpose of the *New Brunswick Health System Report Card*:

The main purpose of the *New Brunswick Health System Report Card* is to provide New Brunswickers with a tool that would be easy to use for communicating and flagging key areas of focus as it relates to the quality of the health services being delivered.

To help frame the task at hand we can use the analogy of looking at the tip of an iceberg to attempt to explain the massiveness that lies beneath. The data presented in this report card assists in identifying how well New Brunswick performs in relations to other provinces in terms of health care quality.

Grading the health system based on overall dimensions of quality and sectors allows the public and decision-makers an opportunity to focus on some larger key areas in a very complex health care delivery system with numerous competing priorities. The deeper level of information or specific indicators within the performance index grade is intended for use by managers and others involved in measuring, monitoring and evaluating health services at the delivery end. It has the potential to allow organizations delivering the services to drill down to their own program-level indicators which have been aligned to the particular system indicator represented on the *Report Card*.

Yearly report cards can be used to monitor and track changes over time. Although this information is available in the system, having it organised in a way that provides decision-makers a holistic view of the health system is the advantage of our report card.

This view can provide opportunities to identify how changes in programs and services can affect other programs and services in other sectors of care. It can also provide a unique lens in service gaps for patients/citizens moving through the health system. An example of this is Primary Health, which received a “D” grade in the 2010 Report Card. This helped direct the choice of the next sector for surveying. The result was, *New Brunswickers’ Experiences with Primary Health Care, 2011 Survey* (NBHC 2011). The survey results have helped stakeholders focus on primary care as an area of improvement (Fall 2011 Primary Care Stakeholder Summit).

The *Report Card* and indicators hold the potential to:

- guide quality improvement activities;
- redesign services,
- keep people and organizations accountable for their performance,
- change policy and practice,
- inspire public debate.

Development of Performance Index Grades:

Indices or grades are commonly being used today by numerous organizations and institutions. CIHI has the *Wait Time Alliance Report Card*⁷, the Fraser Institute⁸ has report cards on hospitals and schools for select provinces in Canada, The Conference Board of Canada has a *How Canada Performs: A Report Card on Canada*⁹ which assesses Canada's quality of life compared with that of its peer countries and the Institute of Well-being has the *Canadian Index of Well-being*¹⁰ which is made up of domains related to well-being which are further made up of various indicators. Finally, there is also *The Frontier Centre for Public Policy, Canada Health Consumer Index 2010*¹¹ which produces reports on how well the ten provinces' health systems serve their residents.

The NBHC chose to follow suit with some of these examples and drawing on some of the methodologies in creating the performance index grades for the *New Brunswick Health System Report Card*.

Letter grading methodology for individual indicators:

The analysis is based on the indicators available when the report was completed. The letter grading is calculated by first identifying the lowest and highest values among provinces. The range is calculated and then divided by 7 to create cut-off points for grade separations. Grades are assigned to each of the ranges from A+, A, B, C, D, E, and F, in keeping with last year's grading method. A+ will correspond to the highest achievable interval and F to the lowest.

Example:

Step 1 – calculation of range:

i.e. range = the worse value (77%) minus better value (84%) = 7

Step 2 – calculation of interval:

i.e. range value of (7) divided by 7 letter grades = 1

⁷ Wait Time Alliance (WTA), *Unfinished business - Report Card on Wait Times in Canada June 2010(2010)*, [online], from < http://www.waittimealliance.ca/media/2010reportcard/WT2010-reportcard_e.pdf >

⁸ Fraser Institute [online], from < <http://www.fraserinstitute.org/reportcards/hospitalperformance/> >

⁹ The Conference Board of Canada, *How Canada Performs: A Report Card on Canada (2011)* [online], from < <http://www.conferenceboard.ca/hcp/Details/Health.aspx> >.

¹⁰ Institute of Wellbeing, *The Canadian Index of Wellbeing (2010)*, [online], from < http://www.ciw.ca/Libraries/Documents/HealthyPopulation_DomainReport.sflb.ashx >.

¹¹ B. Eisen and A. Björnberg, *The Frontier Centre for Public Policy, Canada Health Consumer Index 2010*, (2010), [online], from < http://www.fcpc.org/files/1/PS98_CHCI-2010_DC13_FIB.pdf >

Step 3 – grades are assigned to each interval

i.e. A+=84 to 83.1, A=83 to 82.1, B=82 to 81.1, C=81 to 80.1, D=80 to 79.1, E=79 to 78.1, F=78 to 77

In this case, if New Brunswick = is 80% the Grade for this indicator would be D.

When there is no grade associated to a specific indicator, either only local data was available or the two sources identified were not comparable for grading.

Equity grading methodology:

The Equity Dimension grade is calculated by evaluating health inequities based on the importance that access to good quality services has as a determinant to health outcomes¹².

Certain characteristics of the populations which were chosen for comparison for health equity were based on geography, aboriginal descent, language of service preference, gender, age, education and income.

Step 1: Assign a value of “1” to all characteristics where a significant difference was found or inequity present.

Step 2: Sum all values of “1” to create an inequity score.

i.e. 14

Step 3: Total all characteristics for evaluation to create range.

i.e. 20

Step 4: Divide range by 7 equal cut-off points for Grade levels.

i.e. A+ = 0 - 2.9, A = 2.9 – 5.7, B = 5.7-8.6, C = 8.6-11.4, D = 11.4-14.3, E = 14.3-17.1, F = 17.1.-20

Step 5: Assign the inequity score to a grade level. Lower number of inequities equals a better grade.

¹² Dahlgren C. Whitehead M. Levelling up (part 2): a discussion paper on concepts and principles for tackling social inequalities in health. Copenhagen: WHO Regional Office for Europe, 2006

i.e. 14 = D Grade.

Letter grading methodology for overall performance index grade:

To calculate score, grades are given values to be used for total scoring for trending over time and scoring is used to create overall grade and scoring is used to create overall grade A+ = 1, A = 2, B = 3, C = 4, D = 5, E = 6, F = 7.

Example: Accessibility overall Grade

Step 1 – list all individual grades

C, A+, B, B, D, D, E, F, C, A+, A+, D, D, A+, A+, B, A+, C, B

Step 2 – create average of overall grade using assigned scoring

$$(4+1+3+3+5+5+6+7+4+1+1+5+5+1+1+3+1+4+3) / 19 = 3.3$$

In this case, with a score of 3.3, Accessibility would get an overall grade of B (rounding down).

In situations where it is a value reaches 0.5 (i.e. 3.5) we would round up to the next grade level (i.e. 3.5 = C).

IMPORTANT NOTES:

- *The overall grade should not be viewed in isolation from indicators on which it is based for any policy and/or planning decisions.*
- *Grades need to be considered in the context of the National comparison, and the Pan-Canadian range. An indicator scoring a higher grade only implies a better position in terms of performance in comparison to other provinces. Actual trend of performance can be observed through the “Value Trend” which was introduced in this year’s report card*
- *Any analysis of “improvement” or “trend” remains limited in the absence of clear provincial performance targets*
- *All indicators with stars at the end (*) were also used in the New Brunswick Health System Report card 2010 (NBHC 2010).*

Please note that a grade does not equal better health results, it only speaks to the quality of services being provided when we compare New Brunswick to other provinces.

Listed here is an outline of some advantages and disadvantages to using indices.^{13,14,15}

ADVANTAGES	DISADVANTAGES
<ol style="list-style-type: none"> 1. .Such indices provide simple targets facilitating the focus of attention and can lead to the development of better policies and programs. 2. .The simplicity of a composite index facilitates necessary negotiations about its practical value and usefulness. 3. .Such indices provide a means for simplifying complex, multi-dimensional measures. 4. .They make it easier to measure and visually represent overall trends in several distinct dimensions over time. 5. .Increases in the comparability of information leading to increases in the capacity to make holistic assessments and balanced judgments . 6. .Increases in the capacity to make such holistic assessments and judgments reduce the likelihood of a public agenda being unduly influenced by the relatively narrow interests of a few at the expense of the broader interests of many. 7. .Because indices require construction based on conventions agreed upon by potential users, inventors have considerable flexibility for including desired and excluding undesired features. 8. .A single composite index representing a single value is an excellent communications tool for use with the public, including the news media, general public, and elected and unelected key decision-makers. 	<ol style="list-style-type: none"> 1. .A single index must oversimplify complex issues. 2. .A single index requires all issues to be significantly comparable. 3. .Particular issues will be buried in composite figures, including changes in component variables that significantly increase or decrease the composite figures. 4. .Inadvertent burying of some problems may produce overemphasis on others. 5. .Accuracy and comparability of data will be open to challenge. 6. .Index values have no clear meaning. 7. .Values of domains, variables and indices vary over time. 8. .Composite figures lack practical value, resulting from all their difficulties.

¹³ C. Lance et al., "A Comparison Between Bottom-Up, Top-Down, and Bidirectional Models of Relationships Between Global and Life Facet Satisfaction," *Journal of Personality* 57, 3, (1989): pp 601-624.

¹⁴ A. Saltelli, "Composite indicators between analysis and advocacy", *Social Indicators Research* 81, 1 (2007) pp.65-77.

¹⁵ M. Nardo et al., "Handbook on Constructing Composite Indicators: Methodology and User Guide", *OECD Statistics Working Papers*, 2005/3, OECD Publishing

Changing / Current Indicators:

Some of our indicators have changed to take advantage of new sources that can produce an improved picture of the health system. These indicators are well indicated in the actual indicator tables.

Eighteen (18) new indicators have been added. Some have been developed with the help of stakeholders such as safety indicators explored and aligned by key representatives from Horizon Health Network and Vitalité Health Network, while others have been new indicators introduced by the Canadian Institute for Health Information (CIHI) through the annual health indicators report, and the Canadian Hospital Reporting Project (CHRP). The addition of these new indicators will make the dimensions and sectors more inclusive and representative of the programs and services in New Brunswick.

In this third report card, the primary focus for new indicators were the safety and equity dimensions with expansion to the supportive/specialty sector (more commonly referred to as “continuing care”). The NBHC has tried to represent as many programs and services to provide a more complete performance measurement tool which also mirrors the allocation of funds based on current financial reporting or annual reporting of these services.

Continued Challenges:

As we identify new indicators for our health system report card, a number of challenges continued to present themselves.

The first challenge occurred when trying to identify how to measure the safety and equity dimensions soon after the initial report card was released. In addition to the development witnessed last year in the safety dimension, more indicators were explored and developed covering in hospital falls, nursing-sensitive adverse events, safety culture among staff, and infection control.

The equity dimension was much more difficult to address from a measurement perspective since there are a number of different approaches or areas of possible focus. In addition, there is little consensus about the meaning of the terms “health disparities,” “health inequalities,” or “health equity”. The definitions can have important practical consequences, determining the measurements that are monitored by governments and the activities that will be supported by resources earmarked to address health disparities/inequalities or health equity. For the NBHC, access to good quality health services is an important health determinant¹¹ and therefore, understanding whether there are

disparities for these vulnerable groups in New Brunswick is not only important but valuable for planning and policy purposes. Choosing a methodology to analyze health inequity was based on the study of the differences in access to family physicians, quality of primary health care providers and places and quality of hospital services across demographic characteristics. Calculating the overall grade for the equity dimension also required a slightly different approach than the overall grading methodology for all other dimensions of quality.

We continue to be challenged on identifying indicators which will effectively measure the quality of the “end-of-life/palliative care sector”. Since most of the services and programs are delivered either through hospital services (*acute care*), the Extra-Mural Program (*supportive/specialty*) or in a long term care facility (*supportive/specialty*), the challenge is data capture. Therefore, we have removed this sector for public reporting of the grades.

The next major challenge was in identifying indicators that were being collected for programs or services designated in our supportive/specialty sector which is more commonly referred to as “continuing care”. We identified four program areas: community mental health, home care, long term care and rehabilitation services. Although we were fairly successful at identifying and including indicators for at least three of these additional areas, finding provincial or international comparators was extremely limited. The *Home Care Survey 2012* conducted and released by the NBHC in October 2012, provided more insights and data pertaining to home care, which enriched the coverage of the supportive/specialty sector, especially from an equity perspective.

The challenges continued, with being restricted to data or indicators that were able to provide flags for performance areas that require attention and that could drill down to zone level or even program level for further analysis and evaluation. In the first year, the 48 indicators were restricted to system or program level indicators from national databases in order to build comfort level with the use of the report card to create a common baseline performance picture.

Key Trends / Observations:

Accessibility:

Overall, accessibility lost some of the gains achieved last year, and went back to a “C” grade. Further improvement was achieved in having regular medical doctors (among the highest rates in Canada), yet it does not translate into better access to doctor visits with more people reporting difficulties accessing routine or immediate care.

Access to some surgeries got worse with more patients waiting longer for some orthopedic surgeries (hip fractures: “A+” to “C” and knee replacement from “D” to “E”).

Despite the reduction in the availability of nursing home beds per the population of 75 years and over, the wait for long term care home placement seems to be decreasing. The Extra-Mural Program is steadily serving more clients per population, and getting a larger proportion of referrals from community compared to those from hospitals. Children and youth’s access to mental health services needed within 30 days continues to trend in the wrong direction (41%). Fewer people are getting access to selected diagnostic imaging services within a month (from 70.5% to 65%), yet more people are able to access specialists within a month (from 44.3% to 59.7%).

Appropriateness:

Appropriateness is defined as the care or service provided that is relevant to the patients’/clients’ needs and based on established standards. This year’s report card has shown a return to “C” after scoring “D” last year. This was driven mainly by the improvement in the appropriateness of acute care with lower hysterectomy rates, as well as fewer mental illness hospitalizations. There is still room for improvement in achieving better infants hearing screening rates which continues to demonstrate major regional differences (48.0% to 99.2%). As for primary care, aside from the improvement in flu shots provided to the elderly, and colorectal cancer screening for those above the age of 50, poorer performances were noted in breastfeeding initiation (82% to 69.5%), and chronic disease management that still requires improvement especially in the areas of measuring cholesterol, blood pressure and body weight. However, slightly more patients are getting mental health screening within 48 hours (from 37% to 38%).

Effectiveness:

From a health system perspective, this dimension of quality provided the most insight on outcomes of care and the significant gaps that exist to

deliver an integrated system. Effectiveness is often reflective of outcomes on patients since the intervention or action should achieve the desired result. The grade on effectiveness remained at “C”, but it will be important to analyze the trends by sectors of care.

Primary care still requires serious improvements in effectiveness of prevention and health promotion as more people are still being diagnosed for high blood pressure, fewer people are in control of blood sugar, and more stroke events are being hospitalized (despite a slightly higher relative grade from “D” to “C” this year).

The effectiveness of primary care seems to have achieved slight improvement as translated by a lower rate of ambulatory case sensitive conditions being hospitalized scoring “E” in comparison to “F” last year.

The effectiveness of acute care seems to be improving with excellent to very good performance in controlling/reducing readmission rates (e.g. pediatrics and surgical), however, certain areas such as Acute Myocardial Infarction (AMI), hip replacement, and knee replacement readmissions require further improvement that scored “D”, “E” and “F” respectively.

Within the supportive/specialty sector, New Brunswick has achieved better rates in adopting the Electronic Medical Record model, and some improvement in the percentage of patients with repeat hospitalization for mental illness (from 11.9% to 10.4% and grade shift from “C” to “A”). However, performance areas that should be addressed include mental health services within the area of self-injury hospitalization rates receiving an “E” grade, and for the supportive services in general for the control and reduction of the prevalence of disabling pain and discomfort which also received an “E” grade.

Efficiency:

Efficiency is still receiving a “C” grade this year, with some indicators showing improvement, and others trending in the wrong direction.

A higher proportion of ED visits are attributed to less urgent and non-urgent cases.

The overall relative stagnant performance in quality of care observed for primary care access, appropriateness and efficiency contributes to a higher demand for acute care services, thus potentially affecting observed poorer acute care efficiency. Average Length of Stay in New Brunswick remains among the longest in Canada, and when adjusted for age, New Brunswick scores “E”.

Financially, and despite ranking well (in comparison to other provinces), the cost per weighted case (receiving an “A” grade) seems to be increasing, together with the nursing inpatient services total personnel worked hours per weighted case (receiving an “E” grade). On a positive note, a new indicator was added to reflect the percentage of administrative services expenses as part of total expenses, and New Brunswick

scored a “B” on that measure.

An increase was noticed in the use of MRI scanners, unlike the situation for CT scanners (tests per scanner, grade shift from “A+” to “C”).

Safety:

Out of the 6 quality dimensions that NBHC reports on, safety received the highest index grade in this year’s report card “A”.

In the supportive/specialty sector, major progress was achieved through the reduction in the mortality rate from suicide (from 13.2 to 10.4 per 100,000, and a grade shift from “F” to “A”).

New Brunswick continues to be ranking well among other provinces for hospital standardized mortality ratio (going up to an “A” from a “B” last year).

New indicators were added for acute care safety demonstrating an excellent rank on in-hospital hip fractures for elderly, and nursing sensitive adverse events for medical and surgical patients. Nosocomial infection rates continue to be among the lowest, with a slight increase for Clostridium Difficile Associated Disease rate.

Overall fewer people are getting injured and are requiring hospitalization; however, one area requiring some attention is the increased hip fracture events that are being hospitalized, which highlights a need for more effective safety prevention in primary care and overall public health and safety practices.

Equity :

In terms of equity, the overall grade remained at “C”. The same inequities were reported for primary and acute care (from the previous report card), yet an equity section was added for the supportive/specialty sector (revealing the results of the recently released October results of the *Home Care Survey 2012*).

For the Extra-Mural Program and home health care services, inequities were reported for the aboriginal population being less satisfied with home health care services, as well as younger people (those under 65 years of age), and people with higher education. As for home support services (provided by the Department of Social Development), there was a rural/urban, age, and educational level inequity, with rural populations, younger people and those with high-school, GED being less satisfied.





2012 New Brunswick Health System Report Card*



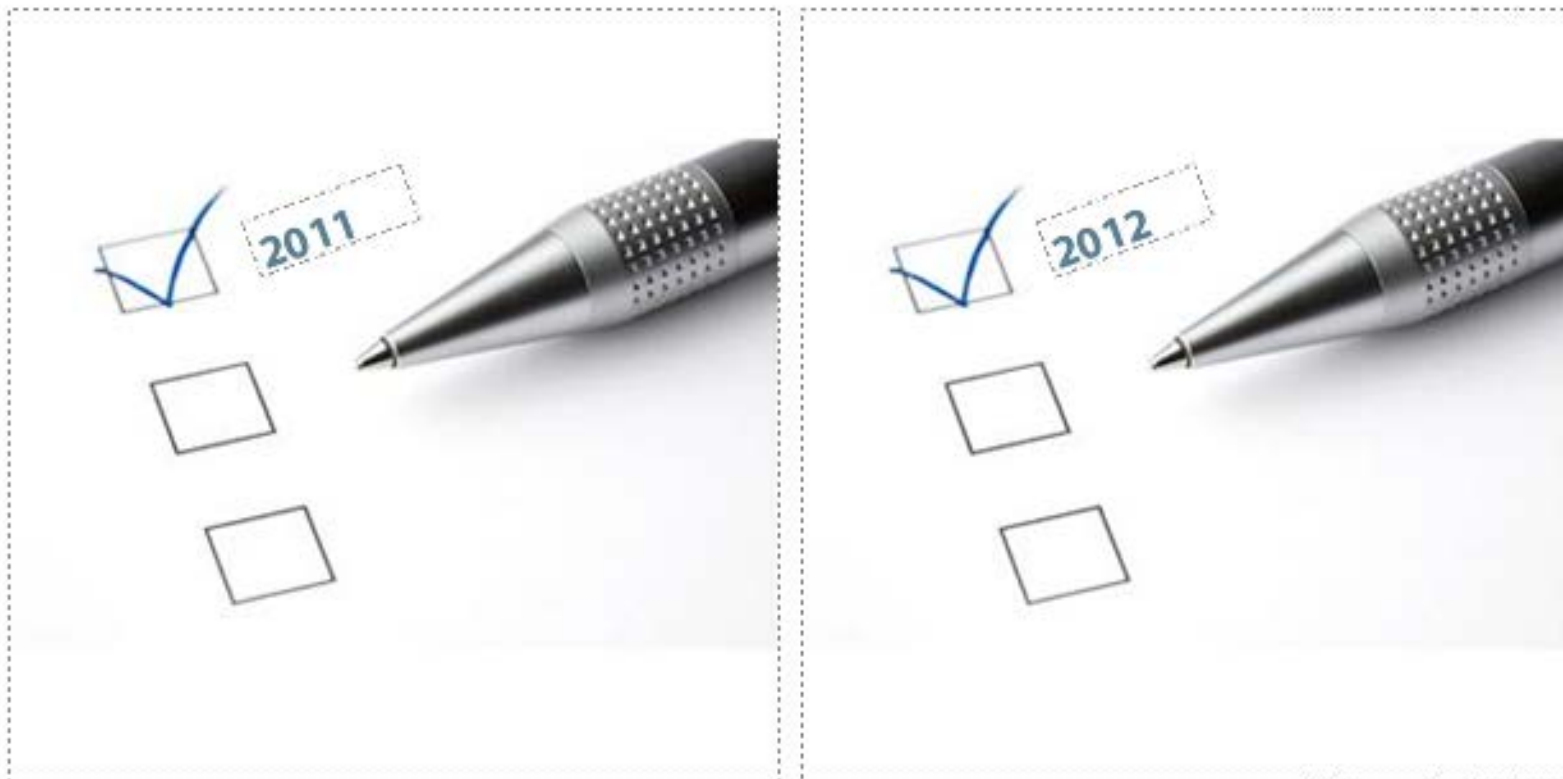
**We continue to be challenged on identifying indicators which will effectively measure the quality of the “end-of-life/palliative care sector”. Since most of the services and programs are delivered either through hospital services (acute care), the Extra-Mural Program (supportive/specialty) or in a long term care facility (supportive/specialty), the challenge is data capture. Therefore, we removed this sector for public reporting of the grades*

2012 New Brunswick Health System Report Card



Health Care Sectors				Performance Index Grade (by Quality Dimension)
Primary Health	Acute Care	Supportive/ Specialty		
 <p>The care a person receives upon first contact with the health system, before referral elsewhere within the system.</p>	 <p>Hospital based care.</p>	 <p>Care received in the community or as an out-patient.</p>		
	Providing timely services		C	
	Relevant and evidence based		C	
	Doing what is required to achieve the best possible results		C	
	Making the best use of the resources		C	
	Keeping people safe		A	
	Aiming for equitable care and services for all		C	
D	B	B	C	

Comparison





Trending New Brunswick Health System Report Card



Quality Dimensions	Accessibility	Providing timely services	C	B	C
	Appropriateness	Relevant and evidence based	C	D	C
	Effectiveness	Doing what is required to achieve the best possible results	C	C	C
	Efficiency	Making the best use of the resources	C	C	C
	Safety	Keeping people safe	A	B	A
	Equity	Aiming for equitable care and services for all	Not available	D	C
	Performance Index Grade (by Health Care Sector)				
2010	D	C	B	C	
2011	C	C	B		
2012	D	B	B		

Indicators by quality dimensions



2012 - Indicators by Quality Dimension – 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.							
(Providing timely services)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Health care sector - PRIMARY HEALTH:							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.							
Contact with a medical doctor in the past 12 months (%)*1	2009-2010	80.8%	--	77.4% - 83.5%	C	C	--
Has a regular medical doctor (%)*2	2011	92.3%	↑	74.5% - 93.5%	A+	A+	■
Difficulties accessing routine or on-going care at any time of day (%)*3	2011	11.4%	↓	23.5% - 11.4%	A+	A+	■
Difficulties accessing immediate care for a minor health problem at any time of day (%)*4	2011	21.7%	↓	31.8%-17.7%	B	B	■
Family practitioner and general practitioners who provide extended office hours regularly (%)5	2011	21.6%	--	7.0% - 31.3%	--	--	--
Patients who contact or are referred to their family physicians or general practitioners URGENTLY, can have an appointment the same day (%) (as reported by physicians)6	2010	41.8%	--	35.2% - 57.0%	D	D	--
Percentage of patients seen within 1 week for NON-URGENT visit with family physician or general practitioners (%) (as reported by physicians)6	2010	18.3%	--	9.3% - 34.2%	D	D	--
First available appointment - from patient contacts with physicians office or referred to office by another physician – URGENT only (mean number of days) (%) (as reported by physicians)6	2010	3.43 days	--	3.66 days - 2.26 days	E	E	--
Contact with dental professionals in the past 12 months (%)*7	2007-2008	54.7%	--	53.6% - 69.4%	F	F	--
Spending on prescription drugs greater than 3% of after tax income (%)*8	2008	9.1%	--	13.3% - 4.6%	C	C	--
Left without being seen from the Emergency Room (%)9	2011-2012	5.6%	↑	3.5% Ontario (zones: 6.7%-3.4%)	--	--	--
% of emergency calls done within the appropriate time (9 min –urban, 22 min – rural) for ambulance services (%)10	2011-2012	95.33%	↔	Target: 90%	A+	A+	■
Emergency Room - Patients who are seen within 4 hours (%)11	2011	75.0%	--	73.0% - 96.0%	--	--	--

1. Statistics Canada, Table 105-0502. <http://www.statcan.gc.ca>

2. Statistics Canada, Table 105-0501. <http://www.statcan.gc.ca>

3. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

4. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

5. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011) .
http://www.nbhc.ca/nb_primary_care_health_survey.cfm

6. National Physician Survey. <http://www.nationalphysiciansurvey.ca/nps>

7. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

8. Statistics Canada, Table 109-5012. <http://www.statcan.gc.ca>

9. New Brunswick Department of Health

10. Ambulance New Brunswick. <http://www.ambulancenb.ca/>

11. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011).
http://www.nbhc.ca/nb_primary_care_health_survey.cfm In combination with the Commonwealth fun 2007 (for range)

2012 - Indicators by Quality Dimension – 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.							
(Relevant and evidence based)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
Wait time for hip fracture surgery (proportion with surgery - within 48 hours) (%) ^{*1}	2010-2011	81.6%	↓	76.1%-86.1%	C	A+	■
Wait time for hip replacement surgery (within 26 weeks) (%) ^{*2}	April-Sept2011	72.0%	↑	59.0% - 90.0%	D	D	■
Wait time for knee replacement surgery (within 26 weeks) (%) ^{*2}	April-Sept2011	53.0%	↓	44.0% - 85.0%	E	D	■
Wait time for cataract surgery (within 16 weeks) (%) ^{*2}	April-Sept2011	85.0%	↓	58.0% - 88.0%	A+	A+	■
Wait time for Coronary Artery Bypass Graft Surgery –Level II (within 42 days) (%) ^{*3 (NEW)}	2011-2012	88.0%	--	--	--	--	--
Wait time for radiation therapy (within 28 days) (%) ^{*2}	April-Sept2011	95.0%	↔	83.0% - 100.0%	B	B	■
Health care sector - SUPPORTIVE/SPECIALTY:							
The care received in the community or as an outpatient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
Wait time for selected diagnostic tests: Magnetic Resonance Imaging (MRI), CAT (CT) scan, angiography (within 1 month) (%) ^{*4}	2011	65.0%	↓	60.9%-79.2%	E	A+	■
Nursing home beds per 100 persons aged 75 and over (Rate per 100) ^{*5}	2011-2012	8.1%	↓	To be determined	To be determined	To be determined	--
Wait time for specialist visits for a new illness or condition (within 1 month) (%) ^{*6}	2011	59.7%	↑	50.9%-62.1%	A	C	■
Experience difficulties getting specialist care (% with fair or poor access) (%) ⁷	2010	14.3%	--	30.7% - 13.8%	A+	A+	--
Median number of day to long term Care Home placement (days) ⁸	2011-2012	121.22 days	↑	To be determined	To be determined	To be determined	--
Extra-Mural Program – Clients served per 1000 ⁹	2011-2012	53.0	↑	To be determined	To be determined	To be determined	--
Extra-Mural Program – % Referred from community (%) ⁹	2011-2012	68.7%	↑	To be determined	To be determined	To be determined	--
Extra-Mural Program – % Referred from hospital (%) ⁹	2011-2012	31.3%	↓	To be determined	To be determined	To be determined	--
Percentage of service delivery done within 30 days (from referral to first visit) for child and youth mental illness (%) ¹⁰	2011-2012	41.0%	↓	Zones: 10.0%-64.0%	--	--	--
Overall Performance Index					C	B	■

1. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CiHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

2. Canadian Institute for Health Information – Wait times in Canada – A comparison by province, 2011

3. Department of Health. Wait times in New Brunswick

4. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

5. NB Department of Social Development 2010-2011 in combination with Statistics Canada – atalogue 92-591-XWE. <http://www.statcan.gc.ca>

6. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

7. National Physician Survey. <http://www.nationalphysicianssurvey.ca/nps>

8. NB Department of Social Development 2011-2012

9. New Brunswick Department of Health, Extra-Mural Program

10. New Brunswick Department of Health, Mental Health. (range used is New Brunswick Health Zones)

New Brunswick Health system Report Card 2012

Value Trend:
 ↑ Better performance
 ↔ Same performance
 ↓ Worse performance
 Bold: Updated indicator
 Grade trend:
 ■ Higher Grade (or same A+ grade)
 ■ Same Grade
 ■ Lower Grade

2012 - Indicators by Quality Dimension – APPROPRIATENESS:							
Care/service provided is relevant to the patients'/clients' needs and based on established standards. (Relevant and evidence based)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - PRIMARY HEALTH:							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.							
Pap smear within the last 3 years, for females aged 18 to 69 years (%) ^{*1}	2007-2008	78.9%	--	Zones:70.7% - 87.0%	--	--	--
Received a mammogram within the last 2 years, females aged 50 to 69 years (%) ^{*1}	2009-2010	76.8%	--	68.5% - 76.8%	A+	A+	--
Breastfeeding initiation (%) ^{*2}	2011	69.5%	↓	54.3% - 94.4%	D	B	■
Colorectal cancer screening above age 50 (colonoscopy in the past 5 years or a fecal occult blood test in the past 2 years) (%) ^{*3}	2009-2010	54.8%	↑	51.3%-67.3%	E	E	■
Proportion of kindergarten children meeting immunization requirements (%) ⁴	2009-2010	91.4%	--	Zones: 88.1% - 99.0%	--	--	--
% of adult 65 and over who received their flu shot in the last year (%) ²	2011	67.0%	↑	55.5% - 75.0%	B	C	■
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Blood Pressure in the past 12 months (%) ^{*5}	2011	93.3%	--	88.0% - 97.0%	B	B	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Cholesterol in the past 12 months (%) ^{*5}	2011	79.8%	--	78.0 - 86.0%	E	E	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Blood Sugar in the past 12 months (%) ^{*5}	2011	76.6%	--	75.0% - 85.0%	E	E	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Body Weight in the past 12 months (%) ^{*5}	2011	64.3%	--	66.0% - 80.0%	E	E	--
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
Hysterectomy age-standardized rate (rate per 100,000) ^{*6}	2010-2011	399	↑	435 - 299	E	F	■
Proportion of women delivering babies in acute care hospitals by Caesarean section (%) ^{*7}	2010-2011	29.4%	↓	33.2% - 21.7%	C	E	■
Universal newborn and infant hearing screening (%) ⁸	2011-2012	86.1%	↓	48.0%-99.2%	--	--	--
Use of Coronary Angiography Following Acute Myocardial Infarction (rate per 100) ^{7 (NEW)}	2010-2011	72.1	--	52.5-75.6	A	--	--
Aged-standardized mental illness hospitalization rate (age-standardized rate per 100,000) ⁶	2010-2011	588	↑	870 – 379	B	C	■
Health care sector - SUPPORTIVE/SPECIALTY:							
The care received in the community or as an outpatient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
Proportion of mental health clients that had a screening assessment within 48 hours (%) ⁹	2011-2012	38.0%	↑	Zones: 9.0%-67.0%	--	--	--
Overall Performance Index					C	D	■

1. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health, (range used is New Brunswick Health Zones)
2. Statistics Canada, Table 105-0501. <http://www.statcan.gc.ca>
3. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health
4. New Brunswick Department of Health, Office of the Chief Medical Officer of Health (range used is New Brunswick Health Zones)
5. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011)
http://www.nbhc.ca/nb_primary_care_health_survey.cfm . in combination with Canadian Institute of Health Information-Experiences With

Primary Health Care in Canada 2009 (for range) http://www.cihi.ca/cihiweb/disPage.jsp?cw_page=AR_2991_E
6. Canadian Institute for Health Information - 2012 Health Indicators Report.
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>
7. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent
8. New Brunswick Department of Health, DAD/WM / AHIM
9. New Brunswick Department of Health, Mental Health. (range used is New Brunswick Health Zones)

2012 - Indicators by Quality Dimension – EFFECTIVENESS:							
The care/service, intervention or action achieves the desired results.							
(Doing what is required to achieve the best possible results)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - PRIMARY HEALTH:							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.							
Age-standardized acute care hospitalization rate for ambulatory care sensitive conditions (rate per 100,000)*1	2010-2011	474	↑	515 - 263	E	F	■
Reported that they have been diagnosed by a health professional as having high blood pressure (%)*2	2011	21.7%	↓	22.5% - 14.8%	F	E	■
Family physician or general practitioner who provides direct patient care with a teaching component based on the total worked hours per week (as reported by physician) (%)*3	2010	4.5%	--	4.5% - 8.6%	F	F	--
% of registered diabetes patients are not in the optimal range of glycemic or sugar control of 7% or less (%)4 (Methodology change)	2010	53.0%	--	To be determined	To be determined	To be determined	--
Physician participating in interprofessional practices (%)3	2010	21.3%	--	16.2% - 31.6%	D	D	--
Hospitalized Stroke Event (aged-standardized rate per 100,000)1	2010-2011	133	↓	146 - 119	C	D	■
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
Low weight babies (live birth less than 2,500 grams) (%) * 5	2009	6.1%	↓	6.9% - 5.4%	C	A+	■
Risk-adjusted rate of acute myocardial infarction (AMI) readmission (%)*1	2008-2011	4.6%	↑	5.2% - 3.1%	D	D	■
Risk-adjusted rate of 30-day acute myocardial infarction (AMI) in-hospital mortality (%)*1	2008-2011	7.7%	↑	8.1% - 6.7%	D	F	■
Risk-adjusted rate of 30-day stroke in-hospital mortality (%)*1	2008-2011	16.3%	↑	19.9% - 14.2%	B	A	■
5-Day In-Hospital Mortality Following Major Surgery (rate per 1,000)6 (NEW)	2010-2011	8.6	--	11.6-5.1	C	--	--
30-day pediatric readmission (Risk-adjusted rate, %) 1 (NEW)	2010-2011	6.0%	--	6.0%-8.7%	A+	--	--
30-day surgical readmission (Risk-adjusted rate, %) 1(NEW)	2010-2011	6.4%	--	6.1%-7.5%	A	--	--
30-day obstetric readmission (Risk-adjusted rate, %) 1 (NEW)	2010-2011	2.2%	--	1.8%-2.7%	C	--	--
30-day Medical readmission (Risk-adjusted rate, %) 1 (NEW)	2010-2011	13.0%	--	12.1%-15.1%	B	--	--
30-day Readmission for mental illness (Risk-adjusted rate %)*1	2010-2011	11.0%	↑	13.0% - 8.9%	C	D	■

1. Canadian Institute for Health Information - 2012 Health Indicators Report
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

2. Statistics Canada, Table 105-0501 - <http://www.statcan.gc.ca>

3. National Physician Survey. <http://www.nationalphysicianssurvey.ca/nps>

4. New Brunswick Department of Health

5. Statistics Canada, Table 102-4509 - <http://www.statcan.gc.ca>

6. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

2012 - Indicators by Quality Dimension – EFFECTIVENESS:							
The care/service, intervention or action achieves the desired results. (Doing what is required to achieve the best possible results)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
90-Day Readmission After Hip Replacement (rate per 100) ^{1 (NEW)}	2010-2011	4.46	--	2.96-4.75	E	--	--
90-Day Readmission After Knee Replacement (rate per 100) ^{1 (NEW)}	2010-2011	4.53	--	4.53-2.45	F	--	--
Five-year relative survival ratios for prostate cancer (relative survival ratio, %) ²	2004-2006	99.0%	--	91.0% – 99.0%	A+	A+	--
Five-year relative survival ratios for breast cancer (relative survival ratio, %) ²	2004-2006	87.0%	--	83.0% - 88.0%	A	A	--
Five-year relative survival ratios for colorectal cancer (relative survival ratio, %) ²	2004-2006	63.0%	--	65.0% - 59.0%	B	B	--
Five-year relative survival ratios for lung cancer (relative survival ratio, %) ²	2004-2006	16.0%	--	14.0% - 18.0%	C	C	--
Health care sector - SUPPORTIVE/SPECIALTY:							
The care received in the community or as an outpatient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
EMR SCORE (Electronic Medical Record Adoption Model score 0 to 7) ³	2 nd quarter 2012	3.057	↑	0.326 – 3.347	A+	A+	■
Patients with repeat hospitalizations for mental illness (Risk adjusted %) ⁴	2009-2010	10.4%	↑	12.7-9.6%	A	C	■
Self-Injury Hospitalization (aged-standardized rate per 100,000) ⁴	2010-2011	77	↑	83 - 44	E	F	■
Pain of discomfort that prevents activities (%) ⁵	2011	15.9%	↓	16.8% - 11.9%	E	E	■
Overall Performance Index					C	C	■

1. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

2. Canadian Cancer registry database at Statistics Canada, 2011

3. HIMSS Analytics™ LLC . <http://www.himssanalytics.org/>

4. Canadian Institute for Health Information - 2012 Health Indicators Report <https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

5. Statistics Canada, Table 105-0501 . <http://www.statcan.gc.ca>

New Brunswick Health system Report Card 2012

Value Trend:
↑ Better performance
↔ Same performance
↓ Worse performance
Bold: Updated indicator

Grade trend:
■ Higher Grade (or same A+ grade)
■ Same Grade
■ Lower Grade

2012 - Indicators by Quality Dimension – EFFICIENCY:							
Achieving the desired results with the most cost-effective use of resources.							
(Making the best use of the resources)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - PRIMARY HEALTH:							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.							
Contact with telephone health line in the past 12 months (%) ^{*1}	2011	12.9%	--	3.2% - 25.3%	C	--	--
Record keeping of physicians in their main patient care setting - use of paper charts only (%) ²	2010	45.0%	--	55.8% - 28.8%	D	D	--
% triage level 4 and 5 (Less urgent and Non-urgent) seen in the emergency room (%) ³	2011-2012	63.1%	↓	Zones:77.8% - 56.4%	--	--	--
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
Percentage of Alternate Level of Care (ALC) days to total inpatient days (%) ^{*3}	2011	21.25%	↑	21.25% – 8.67%	F	F	■
Age standardized Average Length of Stay (ALOS) (in days) ^{4 (NEW)}	2010-2011	8.1	--	6.5-8.5 days	E	--	--
Cost per weighted case (\$) ^{5(New methodology)}	2010-2011	\$5,392	↓	\$6,371-\$5,143	A	A	■
Nursing Inpatient Services Total Personnel Worked Hours per Weighed Case (%) ⁵	2010-2011	57.3%	↓	62.3%- 42.6%	E	D	■
Administrative Service Expense as a Percentage of Total Expense ^{5 (NEW)}	2009	4.4%	--	5.9%-3.5%	B	--	--
Health care sector - SUPPORTIVE/SPECIALTY:							
The care received in the community or as an outpatient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
Number of exams done by CAT (CT) scanners (rate per 1,000 population) ^{* 6}	2010-2011	196	--	98 - 196	--	--	--
Average number of Computed Tomopgraphy (CT) Exams per Scanner (number) ⁶	2010-2011	8,202	↓	6,189 – 10,737	C	A+	■
Number of exams done by Magnetic Resonance Imaging (MRI) scanners (rate per 1,000 population) ^{*6}	2010-2011	50	--	28 - 55	--	--	--
Average number of Magnetic Resonance Imaging (MRI) Exams per Scanner (number) ⁶	2010-2011	6,261	↑	3,267 – 7,571	B	E	■
Average number of days to complete long term care generic assessment (days) ⁷	2011-2012	24.36 days	↑	--	--	--	--
Overall Performance Index					C	C	■

1. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

2. National Physician Survey. <http://www.nationalphysicianssurvey.ca/nps>

3. New Brunswick Department of Health

4. Canadian Institute for Health Information – Highlights of 2010-2011 Inpatient Hospitalizations and Emergency Department Visits, 2012. https://secure.cihi.ca/free_products/DAD-NACRS_Highlights_2010-2011_EN.pdf

5. Canadian Institute for Health Information, Hospital Financial Performance Indicators

6. Canadian Institute for Health Information –National Survey of Selected Medical Imaging Equipment, 2011. http://www.cihi.ca/CIHI-ext-portal/xlsx/internet/STATS_MIT_2011_EN

7. New Brunswick Department of Social Development

2012 - Indicators by Quality Dimension – SAFETY:							
Potential risks of an intervention or the environment are avoided or minimized.							
(Keeping people safe)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - PRIMARY HEALTH:							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.							
Physician who have access to electronic records in various locations, the records in these locations are electronically connected to each other to allow for access of the same electronic record from different settings (%) ¹	2010	33.3%	--	21.4% - 45.0%	C	C	--
Percent of individuals who know what their medications are for (%) ²	2011	46.7%	--	25.7% - 56.1%	--	--	--
Individuals who were injured that required hospitalization (Rate/100 000 population) ³	2010-2011	583	↑	772 - 407	C	C	■
Hospitalized hip fracture event rate (Age-standardized acute care hospitalization rate for fracture of the hip, per 100,000 population) ³	2010-2011	474	↓	546-399	C	A	■
Community error / harm rate (excluding hospital stay) (%) ²	2011	3.4%		Zones: 6.7% - 1.2%	--	--	--
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
Hospital Standardized Mortality Ratio (HSMR)* ⁴	2010-2011	77	↑	120-67	A	B	■
Error rate - % in the community who believe they have suffered harm or error during their stay at an acute care hospital (%) ⁵	2010	5.1%	--	8.9% - 0	--	--	--
Score on the Care Transitions Measures (CTM) (coordination of hospital discharge care) ⁵	2010	36.1	--	24.5 – 64.5	--	--	--
Hand hygiene - % Compliance before Patient Contact (as reported by patients) (%) ⁵	2010	47.5%	--	36.5% - 65.0%	--	--	--
% patients who believed that the hospital takes their safety seriously (%) ⁵	2010	76.3%	--	67.6% - 93.8%	--	--	--
Inpatient Fall rate (reported falls in inpatient area per 1000 patient days) ⁶ (NEW)	2011-2012	5.34	--	--	--	--	--

1. National Physician Survey. <http://www.nationalphysiciansurvey.ca/nps>

2. New Brunswickers’ Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011)

3. Canadian Institute for Health Information - 2012 Health Indicators Report
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

4. Canadian Institute for Health Information – 2011 HSMR Results. http://www.cihi.ca/cihi-ext-portal/internet/en/document/health+system+performance/quality+of+care+and+outcomes/hsmr/hsmr_results_canada

5. Hospital Patient Care Experience in New Brunswick, 2010 Acute Care Survey Results (NBHC 2010)

6. Incident Reporting System, Horizon and Vitalité

2012 - Indicators by Quality Dimension – SAFETY:							
Potential risks of an intervention or the environment are avoided or minimized.							
(Keeping people safe)							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Health care sector - ACUTE CARE:							
The care provided in a hospital or a psychiatric facility.							
In-Hospital Hip Fracture in Elderly (65+) Patients (rate per 1,000) ^{1 (NEW)}	2010-2011	0.73	--	1.23-0.64	A	--	--
Nursing-Sensitive Adverse Events for Medical Patients (rate per 1,000) ^{1 (NEW)}	2010-2011	20.37	--	32.99-17.25	A	--	--
Nursing-Sensitive Adverse Events for Surgical Patients (rate per 1,000) ^{1 (NEW)}	2010-2011	27.34	--	48.97-24.22	A+	--	--
Staff perceptions of patient safety at the unit level (% very good or excellent) ^{2 (NEW)}	2012	70%	--	--	--	--	--
Clostridium Difficile Associated Disease Rate (rate per 1,000 patient days) ³	2011-2012	0.27	↓	Target 0.6	A+	A+	■
MRSA Infection Rate or Methicillin-resistant staphylococcus aureus specific infection rate (rate per 1,000 patient days) ³	2011-2012	0.04	↑	Target 0.6	A+	A+	■
VRE infection rate (rate per 1,000 patient days) ^{3 (NEW)}	2011-2012	0	--	--	A+	--	--
Health care sector - SUPPORTIVE/SPECIALTY:							
The care received in the community or as an outpatient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
% of patients who reported staff talking about all the medications they were taking through EMP ^{4 (NEW)}	2012	72.3%	--	--	--	--	--
Intentional self-harm (suicide) age-standardized mortality rate (rate per 100,000) ⁵	2009	10.4	↑	15.5 – 8.5	A	F	■
Overall Performance Index					A	B	■

1. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

2. Patient Safety Culture Survey (Accreditation Canada) Horizon and Vitalite data

3. Infection, Prevention and Control, Horizon and Vitalité

4. New Brunswick Health Council. Home Care Survey 2012.

5. Statistics Canada, Table 102-0552. <http://www.statcan.gc.ca>

2012- Indicators by Quality Dimension – EQUITY:
Providing quality care 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.
(Aiming for equitable care and services for all)

Indicators	NB Value	1 = difference is statistically significant
Health care sector - PRIMARY HEALTH: The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.		
Has a family physician ¹ (%)	92.6%	--
rural	93.9%	1
urban	90.9%	
Aboriginal	87.5%	1
non-aboriginal	92.7%	
French	96.0%	1
English	93.4%	
Male	90.5%	1
Female	94.4%	
18-34	88.6%	1
35-54	92.2%	
55-64	95.3%	
65+	96.5%	
8th grade or less	92.6%	0
some high-school	94.2%	
high-school, GED	91.1%	
College / trade diploma	93.7%	
Undergraduate degree	92.4%	
Graduate degree	92.2%	0
Income < \$25M	91.7%	
Income \$25M-\$60M	92.7%	
Income >= \$60M	92.7%	

1. New Brunswicker's Experience with Primary Health Care, 2011 Survey Results (NBHC 2011). http://www.nbhc.ca/nb_primary_care_health_survey.cfm

2012- Indicators by Quality Dimension – EQUITY:
Providing quality care 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.
(Aiming for equitable care and services for all)

Indicators	NB Value	1 = difference is statistically significant
Health care sector - PRIMARY HEALTH:		
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness.		
Overall rating of services from primary health care providers and places ¹ (Score)		
rural	100.3	0
urban	99.6	
Aboriginal	90.7	1
non-aboriginal	100.4	
French	102.4	1
English	99.1	
Male	97.7	1
Female	101.5	
18-34	94	1
35-54	97.4	
55-64	105.8	
65+	109.8	
8th grade or less	105.5	1
some high-school	99.2	
high-school, GED	97.8	
College / trade diploma	98.9	
Undergraduate degree	103.1	
Graduate degree	102.5	
Income < \$25M	99	0
Income \$25M-\$60M	100.6	
Income >= \$60M	99.8	

1. New Brunswicker's Experience with Primary Health Care, 2011 Survey Results (NBHC 2011). http://www.nbhc.ca/nb_primary_care_health_survey.cfm

2012 - Indicators by Quality Dimension – EQUITY:
Providing quality care 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.
(Aiming for equitable care and services for all)

Indicators	NB Value	1 = difference is statistically significant
Health care sector - ACUTE CARE: The care provided in a hospital or a psychiatric facility.		
Overall hospital rating ¹ (% 8, 9, or 10 on a scale of 0 to 10)	75.9%	
Rural	77.0%	0
Urban	75.0%	
Aboriginal	75.0%	0
non-aboriginal	73.0%	
French	76.6%	0
English	75.7%	
Male	78.3%	1
Female	74.0%	
Under 45	58.8%	1
45-64	75.8%	
65+	79.2%	
8th grade or less	80.0%	1
some high-school	80.8%	
high-school, GED	74.8%	
College / trade diploma	72.6%	
Undergraduate degree	70.3%	
Graduate degree	69.5%	

1. Hospital Patient Care Experience in New Brunswick, 2010 Acute Care Survey Results (NBHC 2010) http://www.nbhc.ca/care_experience_survey.cfm

2012 - Indicators by Quality Dimension – EQUITY:
Providing quality care 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.
(Aiming for equitable care and services for all)

Indicators	NB Value	1 = difference is statistically significant
Health care sector - SUPPORTIVE/SPECIALTY: The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.		
Overall rating for home healthcare services (EMP) received ¹ (% 8, 9, or 10 on a scale of 0 to 10)	96.7%	
Rural	96.7%	0
Urban	96.8%	
Aboriginal	92.1%	1
non-aboriginal	96.9%	
French	97.6%	0
English	96.5%	
Male	96.5%	0
Female	96.8%	
Under 65	94.2%	1
65-74	97.2%	
75+	98.1%	
8th grade or less	97.9%	1
some high-school	97.8%	
high-school, GED	97.4%	
Post-secondary	95.4%	0
Less than \$25,000	96.3%	
\$25,000 or more	97.0%	

1. New Brunswick Health Council. Home Care Survey (2012). http://www.nbhc.ca/home_care_survey.cfm

2012 - Indicators by Quality Dimension – EQUITY: Providing quality care 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. (Aiming for equitable care and services for all)		
Indicators	NB Value	1 = difference is statistically significant
Health care sector - SUPPORTIVE/SPECIALTY: The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.		
Overall rating for home support services received ¹ (% 8, 9, or 10 on a scale of 0 to 10)	87.9%	
Rural	90.4%	1
Urban	85.2%	
Aboriginal	91.0%	0
non-aboriginal	87.9%	
French	87.3%	0
English	88.2%	
Male	89.4%	0
Female	87.3%	
Under 65	84.8%	1
65-74	90.2%	
75-84	88.5%	
85+	90.0%	
8th grade or less	90.1%	1
some high-school	90.4%	
high-school, GED	84.0%	
Post-secondary	86.3%	0
Less than \$25,000	87.8%	
\$25,000 or more	87.2%	

	2012 Grade	2011 Grade	Grade Trend
Overall Performance Index	C	D	Higher Grade

1. New Brunswick Health Council. Home Care Survey (2012). http://www.nbhc.ca/home_care_survey.cfm

Indicators by sectors of care



2012 – Indicators by Health care sector– PRIMARY HEALTH							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension – 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. (Providing timely services)							
Contact with a medical doctor in the past 12 months (%)*1	2009-2010	80.8%	--	77.4% - 83.5%	C	C	--
Has a regular medical doctor (%)*2	2011	92.3%	↑	74.5% - 93.5%	A+	A+	■
Difficulties accessing routine or on-going care at any time of day (%)*3	2011	11.4%	↓	23.5% - 11.4%	A+	A+	■
Difficulties accessing immediate care for a minor health problem at any time of day (%)*4	2011	21.7%	↓	31.8%-17.7%	B	B	■
Family practitioner and general practitioners who provide extended office hours regularly (%)5	2011	21.6%	--	7.0% - 31.3%	--	--	--
Patients who contact or are referred to their family physicians or general practitioners URGENTLY, can have an appointment the same day (%) (as reported by physicians)6	2010	41.8%	--	35.2% - 57.0%	D	D	--
Percentage of patients seen within 1 week for NON-URGENT visit with family physician or general practitioners (%) (as reported by physicians)6	2010	18.3%	--	9.3% - 34.2%	D	D	--
First available appointment - from patient contacts with physicians office or referred to office by another physician – URGENT only (mean number of days) (%) (as reported by physicians)6	2010	3.43 days	--	3.66 days - 2.26 days	E	E	--
Contact with dental professionals in the past 12 months (%)*7	2007-2008	54.7%	--	53.6% - 69.4%	F	F	--
Spending on prescription drugs greater than 3% of after tax income (%)*8	2008	9.1%	--	13.3% - 4.6%	C	C	--
Left without being seen from the Emergency Room (%)9	2011-2012	5.6%	↑	3.5% Ontario (zones: 6.7%-3.4%)	--	--	--
% of emergency calls done within the appropriate time (9 min –urban, 22 min – rural) for ambulance services (%)10	2011-2012	95.33%	↔	Target 90%	A+	A+	■
Emergency Room - Patients who are seen within 4 hours (%)11	2011	75.0%	--	73.0% - 96.0%	--	--	--

1. Statistics Canada, Table 105-0502. <http://www.statcan.gc.ca>

2. Statistics Canada, Table 105-0501. <http://www.statcan.gc.ca>

3. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

4. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

5. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011) .
http://www.nbhc.ca/nb_primary_care_health_survey.cfm

6. National Physician Survey. <http://www.nationalphysiciansurvey.ca/nps>

7. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

8. Statistics Canada, Table 109-5012. <http://www.statcan.gc.ca>

9. New Brunswick Department of Health

10. Ambulance New Brunswick. <http://www.ambulancenb.ca/>

11. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011).
http://www.nbhc.ca/nb_primary_care_health_survey.cfm In combination with the Commonwealth fun 2007 (for range)

2012 – Indicators by Health care sector– PRIMARY HEALTH							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension – APPROPRIATENESS: Care/service provided is relevant to the patients’/clients' needs and based on established standards. <i>(Relevant and evidence based)</i>							
Pap smear within the last 3 years, for females aged 18 to 69 years (%)*1	2007-2008	78.9%	--	70.7% - 87.0%	--	--	--
Received a mammogram within the last 2 years, females aged 50 to 69 years (%)*1	2009-2010	76.8%	--	68.5% - 76.8%	A+	A+	--
Breastfeeding initiation (%)*2	2011	69.5%	↓	54.3% - 94.4%	D	B	■
Colorectal cancer screening above age 50 (colonoscopy in the past 5 years or a fecal occult blood test in the past 2 years) (%)*3	2009-2010	54.8%	↑	51.3%-67.3%	E	E	■
Proportion of kindergarten children meeting immunization requirements (%)4	2009-2010	91.4%		88.1% - 99.0%	--	--	--
% of adult 65 and over who received their flu shot in the last year (%)2	2011	67.0%	↑	55.5% - 75.0%	B	C	■
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Blood Pressure in the past 12 months (%)*5	2011	93.3%	--	88.0% - 97.0%	B	B	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Cholesterol in the past 12 months (%)*5	2011	79.8%	--	78.0 - 86.0%	E	E	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Blood Sugar in the past 12 months (%)*5	2011	76.6%	--	75.0% - 85.0%	E	E	--
Age-Standardized Percent of Adults With One or More of Four Select Chronic Conditions Who Had Measurements for Body Weight in the past 12 months (%)*5	2011	64.3%	--	66.0% - 80.0%	E	E	--
Quality Dimension – EFFECTIVENESS: The care/service, intervention or action achieves the desired results. <i>(Doing what is required to achieve the best possible results)</i>							
Age-standardized acute care hospitalization rate for ambulatory care sensitive conditions (rate per 100,000)*6	2010-2011	474	↑	515 - 263	E	F	■
Reported that they have been diagnosed by a health professional as having high blood pressure (%)*7	2011	21.7%	↓	22.5% - 14.8%	F	E	■
Family physician or general practitioner who provides direct patient care with a teaching component based on the total worked hours per week (as reported by physician) (%)*8	2010	4.5%	--	4.5% - 8.6%	F	F	--
% of registered diabetes patients are not in the optimal range of glycemic or sugar control of 7% or less (%)9 (Methodology change)	2010	53.0%	--	To be determined	To be determined	To be determined	--
Physician participating in interprofessional practices (%)8	2010	21.3%	--	16.2% - 31.6%	D	D	--
Hospitalized Stroke Event (aged-standardized rate per 100,000)6	2010-2011	133	↓	146 - 119	C	D	■

1. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health, (range used is New Brunswick Health Zones)

2. Statistics Canada, Table 105-0501. <http://www.statcan.gc.ca>

3. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

4. New Brunswick Department of Health, Office of the Chief Medical Officer of Health (range used is New Brunswick Health Zones)

5. New Brunswickers' Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011) http://www.nbhc.ca/nb_primary_care_health_survey.cfm . in combination with Canadian Institute of Health Information-Experiences With

Primary Health Care in Canada 2009 (for range) http://www.cihi.ca/cihiweb/disppage.jsp?cw_page=AR_2991_E

6. Canadian Institute for Health Information - 2012 Health Indicators Report. <https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

7. Statistics Canada, Table 105-0501 . <http://www.statcan.gc.ca>

8. National Physician Survey. <http://www.nationalphysiciansurvey.ca/nps>

9. New Brunswick Department of Health

2012 – Indicators by Health care sector– PRIMARY HEALTHN							
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Reference year	Value					
Quality Dimension –EFFICIENCY: Achieving the desired results with the most cost-effective use of resources. <i>(Making the best use of the resources)</i>							
Contact with telephone health line in the past 12 months (%) *1	2011	12.9%	--	3.2% - 25.3%	C	--	--
Record keeping of physicians in their main patient care setting - use of paper charts only (%)2	2010	45.0%	--	55.8% - 28.8%	D	D	--
% triage level 4 and 5 (Less urgent and Non-urgent) seen in the emergency room (%)3	2011-2012	63.1%	↓↓	77.8% - 56.4%	--	--	--
Quality Dimension – SAFETY: Potential risks of an intervention or the environment are avoided or minimized. <i>(Keeping people safe)</i>							
Physician who have access to electronic records in various locations, the records in these locations are electronically connected to each other to allow for access of the same electronic record from different settings (%)2	2010	33.3%	--	21.4% - 45.0%	C	C	--
Percent of individuals who know what their medications are for (%)5	2011	46.7%	--	25.7% - 56.1%	--	--	--
Individuals who were injured that required hospitalization (Rate/100 000 population)4	2010-2011	583	↑	772 - 407	C	C	■
Hospitalized hip fracture event rate (Age-standardized acute care hospitalization rate for fracture of the hip, per 100,000 population)4	2010-2011	474	↓↓	546-399	C	A	■
Community error / harm rate (excluding hospital stay) (%)5	2011	3.4%	--	6.7% - 1.2%	--	--	--

1. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

2. National Physician Survey. <http://www.nationalphysicianssurvey.ca/nps>

3. New Brunswick Department of Health

4. Canadian Institute for Health Information - 2012 Health Indicators Report
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

5. New Brunswickers’ Experiences with Primary Health Care, 2011 Survey Results (NBHC 2011) .
http://www.nbhc.ca/nb_primary_care_health_survey.cfm

2012 – Indicators by Health care sector– PRIMARY HEALTH

The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness

Quality Dimension – EQUITY: Providing quality care 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. *(Aiming for equitable care and services for all)*

Indicators	NB Value	1 = difference is statistically significant
Has a family physician (%) ¹	92.6%	--
Rural	93.9%	1
Urban	90.9%	
Aboriginal	87.5%	1
non-aboriginal	92.7%	
French	96.0%	1
English	93.4%	
Male	90.5%	1
Female	94.4%	
18-34	88.6%	1
35-54	92.2%	
55-64	95.3%	
65+	96.5%	
8th grade or less	92.6%	0
some high-school	94.2%	
high-school, GED	91.1%	
College / trade diploma	93.7%	
Undergraduate degree	92.4%	
Graduate degree	92.2%	
Income < \$25M	91.7%	0
Income \$25M-\$60M	92.7%	
Income >= \$60M	92.7%	

1. New Brunswicker's Experience with Primary Health Care, 2011 Survey Results (NBHC 2011)

2012 – Indicators by Health care sector– PRIMARY HEALTH			
The care a person receives upon first contact with the health system, before referral elsewhere within the system. It focuses on health promotion, illness and injury prevention, and the diagnosis and treatment of illness			
Quality Dimension – EQUITY: Providing quality care 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. (Aiming for equitable care and services for all)			
Indicators	NB Value	1 = difference is statistically significant	
Overall satisfaction with services from primary health care providers and places (score) ¹		--	
Rural	100.3	0	
Urban	99.6		
Aboriginal	90.7	1	
non-aboriginal	100.4		
French	102.4	1	
English	99.1		
Male	97.7	1	
Female	101.5		
18-34	94	1	
35-54	97.4		
55-64	105.8		
65+	109.8		
8th grade or less	105.5	1	
some high-school	99.2		
high-school, GED	97.8		
College / trade diploma	98.9		
Undergraduate degree	103.1		
Graduate degree	102.5		
Income < \$25M	99	0	
Income \$25M-\$60M	100.6		
Income >= \$60M	99.8		

	2012 Grade	2011 Grade	Grade Trend
Overall Performance Index	D	C	■

1. New Brunswicker's Experience with Primary Health Care, 2011 Survey Results (NBHC 2011)

2012 – Indicators by Health care sector– ACUTE CARE							
The care provided in a hospital or a psychiatric facility.							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension – 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. <i>(Providing timely services)</i>							
Wait time for hip fracture surgery (proportion with surgery - within 48 hours) (%) ^{*1}	2010-2011	81.6%	↓	76.1%-86.1%	C	A+	■
Wait time for hip replacement surgery (within 26 weeks) (%) ^{*2}	April-Sept2011	72.0%	↑	59.0% - 90.0%	D	D	■
Wait time for knee replacement surgery (within 26 weeks) (%) ^{*2}	April-Sept2011	53.0%	↓	44.0% - 85.0%	E	D	■
Wait time for cataract surgery (within 16 weeks) (%) ^{*2}	April-Sept2011	85.0%	↓	58.0% - 88.0%	A+	A+	■
Wait time for Coronary Artery Bypass Graft Surgery –Level II (within 42 days) (%) ^{*3 (NEW)}	2011-2012	88.0%	--	NA	A+	--	--
Wait time for radiation therapy (within 28 days) (%) ^{*2}	April-Sept2011	95.0%	↔	83.0% - 100.0%	B	B	■
Quality Dimension – APPROPRIATENESS: Care/service provided is relevant to the patients'/clients' needs and based on established standards. <i>(Relevant and evidence based)</i>							
Hysterectomy age-standardized rate (rate per 100,000) ^{*4}	2010-2011	399	↑	435 - 299	E	F	■
Proportion of women delivering babies in acute care hospitals by Caesarean section (%) ^{*1}	2010-2011	27.4%	↑	31.9% - 21.5%	C	E	■
Universal newborn and infant hearing screening (%) ⁵	2011-2012	86.1%	↓	48.0%-99.2%	--	--	--
Use of Coronary Angiography Following Acute Myocardial Infarction (rate per 100) ^{1 (NEW)}	2010-2011	72.1	--	52.5-75.6	A	--	--
Aged-standardized mental illness hospitalization rate (age-standardized rate per 100,000) ⁴	2010-2011	588	↑	870 – 379	B	C	■

1. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

2. Canadian Institute for Health Information – Wait times in Canada – A comparison by province, 2011

3. Department of Health. Wait times in New Brunswick

4. Canadian Institute for Health Information - 2012 Health Indicators Report. <https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

5. New Brunswick Department of Health, DAD/#M / AHIM

2012 – Indicators by Health care sector– ACUTE CARE							
The care provided in a hospital or a psychiatric facility.							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension – EFFECTIVENESS: The care/service, intervention or action achieves the desired results. <i>(Doing what is required to achieve the best possible results)</i>							
Low weight babies (live birth less than 2,500 grams) (%) *1	2009	6.1%	↓↓	6.9% - 5.4%	C	A+	■
Risk-adjusted rate of acute myocardial infarction (AMI) readmission (%)*2	2008-2011	4.6%	↑↑	5.2% - 3.1%	D	D	■
Risk-adjusted rate of 30-day acute myocardial infarction (AMI) in-hospital mortality (%)*2	2008-2011	7.7%	↑↑	8.1% - 6.7%	D	F	■
Risk-adjusted rate of 30-day stroke in-hospital mortality (%)*2	2008-2011	16.3%	↑↑	19.9% - 14.2%	B	A	■
5-Day In-Hospital Mortality Following Major Surgery (rate per 1,000) ^{3 (NEW)}	2010-2011	8.6	--	11.6-5.1	C	--	--
30-day pediatric readmission (Risk-adjusted rate, %) ^{2 (NEW)}	2010-2011	6.0%	--	6.0%-8.7%	A+	--	--
30-day surgical readmission (Risk-adjusted rate, %) ^{2 (NEW)}	2010-2011	6.4%	--	6.1%-7.5%	A	--	--
30-day obstetric readmission (Risk-adjusted rate, %) ^{4(NEW)}	2010-2011	2.2%	--	1.8%-2.7%	C	--	--
30-day Medical readmission (Risk-adjusted rate, %) ^{2(NEW)}	2010-2011	13.0%	--	12.1%-15.1%	B	--	--
30-day Readmission for mental illness (Risk-adjusted rate %) ²	2010-2011	11.0%	↑↑	13.0% - 8.9%	C	D	■
90-Day Readmission After Hip Replacement (rate per 100) ^{3 (NEW)}	2010-2011	4.46	--	2.96-4.75	E	--	--
90-Day Readmission After Knee Replacement (rate per 100) ^{3 (NEW)}	2010-2011	4.53	--	4.53-2.45	F	--	--
Five-year relative survival ratios for prostate cancer (relative survival ratio, %) ⁴	2004-2006	99.0%	--	91.0% – 99.0%	A+	A+	--
Five-year relative survival ratios for breast cancer (relative survival ratio, %) ⁴	2004-2006	87.0%	--	83.0% - 88.0%	A	A	--
Five-year relative survival ratios for colorectal cancer (relative survival ratio, %) ⁴	2004-2006	63.0%	--	65.0% - 59.0%	B	B	--
Five-year relative survival ratios for lung cancer (relative survival ratio, %)	2004-2006	16.0%	--	14.0% - 18.0%	C	C	--

1. Statistics Canada, Table 102-4509 . <http://www.statcan.gc.ca>

2. Canadian Institute for Health Information - 2012 Health Indicators Report
<https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

3. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/documentfull/health+system+performance/indicators/performance/indicator_ent

4. Canadian Cancer registry database at Statistics Canada, 2011

New Brunswick Health system Report Card 2012

Value Trend:
↑ Better performance
↔ Same performance
↓ Worse performance
Bold: Updated indicator

Grade trend:
■ Higher Grade (or same A+ grade)
■ Same Grade
■ Lower Grade

2012 – Indicators by Health care sector– ACUTE CARE							
The care provided in a hospital or a psychiatric facility.							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension –EFFICIENCY: Achieving the desired results with the most cost-effective use of resources. <i>(Making the best use of the resources)</i>							
Percentage of Alternate Level of Care (ALC) days to total inpatient days (%) ^{*1}	2011	21.25%	⬆️	21.25% – 8.67%	F	F	🔴
Age standardized Average Length of Stay (ALOS) (in days) ^{2 (NEW)}	2010-2011	8.1	--	6.5-8.5 days	E	--	--
Cost per weighted case (\$) ^{3(New methodology)}	2010-2011	\$5,392	⬇️	\$6,371- \$5,143	A	A	🟡
Nursing Inpatient Services Total Personnel Worked Hours per Weighed Case (%) ³	2010-2011	57.3%	⬇️	62.3%- 42.6%	E	D	🔴
Administrative Service Expense as a Percentage of Total Expense ^{3 (NEW)}	2009	4.4%	--	5.9%-3.5%	B	--	--
Quality Dimension – SAFETY: Potential risks of an intervention or the environment are avoided or minimized. <i>(Keeping people safe)</i>							
Hospital Standardized Mortality Ratio (HSMR)* ⁴	2010-2011	77	⬆️	120-67	A	B	🟢
Error rate - % in the community who believe they have suffered harm or error during their stay at an acute care hospital (%) ⁵	2010	5.1%	--	8.9% - 0	--	--	--
Score on the Care Transitions Measures (CTM) (coordination of hospital discharge care) ⁵	2010	36.1	--	24.5 – 64.5	--	--	--
Hand hygiene - % Compliance before Patient Contact (as reported by patients) (%) ⁵	2010	47.5%	--	36.5% - 65.0%	--	--	--
% patients who believed that the hospital takes their safety seriously (%) ⁵	2010	76.3%	--	67.6% - 93.8%	--	--	--
Inpatient Fall rate (reported falls in inpatient area per 1000 patient days) ^{6 (NEW)}	2011-2012	5.34	--	--	--	--	--
In-Hospital Hip Fracture in Elderly (65+) Patients (rate per 1,000) ^{7 (NEW)}	2010-2011	0.73	--	1.23-0.64	A	--	--
Nursing-Sensitive Adverse Events for Medical Patients (rate per 1,000) ^{7 (NEW)}	2010-2011	20.37	--	32.99-17.25	A	--	--
Nursing-Sensitive Adverse Events for Surgical Patients (rate per 1,000) ^{(NEW)7}	2010-2011	27.34	--	48.97-24.22	A+	--	--
Staff perceptions of patient safety at the unit level (% very good or excellent) ^{8 (NEW)}	2012	70%	--	--	--	--	--
Clostridium Difficile Associated Disease Rate (rate per 1,000 patient days) ⁹	2011-2012	0.27	⬇️	Target 0.6	A+	A+	🟢
MRSA Infection Rate or Methicillin-resistant staphylococcus aureus specific infection rate (rate per 1,000 patient days) ⁹	2011-2012	0.04	⬆️	Target 0.6	A+	A+	🟢
VRE infection rate (rate per 1,000 patient days) ^{9 (NEW)}	2011-2012	0	--	--	A+	--	--

1. New Brunswick Department of Health

2. Canadian Institute for Health Information – Highlights of 2010-2011 Inpatient Hospitalizations and Emergency Department Visits, 2012. https://secure.cihi.ca/free_products/DAD-NACRS_Highlights_2010-2011_EN.pdf

3. Canadian Institute for Health Information, Hospital Financial Performance Indicators

4. Canadian Institute for Health Information – 2011 HSMR Results. http://www.cihi.ca/cihi-ext-portal/internet/en/document/health+system+performance/quality+of+care+and+outcomes/hsmr/hsmr_results_canada

5. Hospital Patient Care Experience in New Brunswick, 2010 Acute Care Survey Results (NBHC 2010)

6. Incident Reporting System, Horizon and Vitalité

7. Canadian Institute for Health Information – Canadian Hospital Reporting Project. http://www.cihi.ca/CIHI-ext-portal/internet/en/document/full/health+system+performance/indicators/performance/indicator_ent

8. Patient Safety Culture Survey (Accreditation Canada) Horizon and Vitalité data

9. Infection, Prevention and Control, Horizon and Vitalité

2012 – Indicators by Health care sector– ACUTE CARE		
The care provided in a hospital or a psychiatric facility.		
Quality Dimension – EQUITY: Providing quality care 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. (Aiming for equitable care and services for all)		
Indicators	NB Value	1 = difference is statistically significant
Overall hospital rating (%) ¹	75.9%	
Rural	77.0%	0
Urban	75.0%	
Aboriginal	75.0%	0
non-aboriginal	73.0%	
French	76.6%	0
English	75.7%	
Male	78.3%	1
Female	74.0%	
Under 45	58.8%	1
45-64	75.8%	
65+	79.2%	
8th grade or less	80.0%	1
some high-school	80.8%	
high-school, GED	74.8%	
College / trade diploma	72.6%	
Undergraduate degree	70.3%	
Graduate degree	69.5%	

	2012 Grade	2011 Grade	Grade Trend
Overall Performance Index	B	C	Higher Grade

1. Hospital Patient Care Experience in New Brunswick, 2010 Acute Care Survey Results (NBHC 2010) http://www.nbhc.ca/care_experience_survey.cfm

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Value Trend:
↑ Better performance
↔ Same performance
↓ Worse performance
Bold: Updated indicator

Grade trend:
■ Higher Grade (or same A+ grade)
■ Same Grade
■ Lower Grade

2012 – Indicators by Health care sector– SUPPORTIVE/SPECIALTY:							
The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension – 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. <i>(Providing timely services)</i>							
Wait time for selected diagnostic tests: Magnetic Resonance Imaging (MRI), CAT (CT) scan, angiography (within 1 month) (%) ^{*1}	2011	65.0%	↓	60.9%-79.2%	E	A+	■
Nursing home beds per 100 persons aged 75 and over (Rate per 100) ^{*2}	2011-2012	8.1%	↓	To be determined	To be determined	To be determined	--
Wait time for specialist visits for a new illness or condition (within 1 month) (%) ^{*3}	2011	59.7%	↑	50.9%-62.1%	A	C	■
Experience difficulties getting specialist care (% with fair or poor access) (%) ⁴	2010	14.3%	--	30.7% - 13.8%	A+	A+	--
Median number of day to long term Care Home placement (days) ⁵	2011-2012	121.22 days	↑	To be determined	--	To be determined	--
Extra-Mural Program – Clients served per 1000 ⁶	2011-2012	53.0	↑	To be determined	--	To be determined	--
Extra-Mural Program – % Referred from community (%) ⁶	2011-2012	68.7%	↑	To be determined	--	To be determined	--
Extra-Mural Program – % Referred from hospital (%) ⁶	2011-2012	31.3%	↓	To be determined	--	To be determined	--
Percentage of service delivery done within 30 days (from referral to first visit) for child and youth mental illness (%) ⁷	2011-2012	41.0%	↓	10.0%-64.0%	--	--	--
Quality Dimension – APPROPRIATENESS: Care/service provided is relevant to the patients'/clients' needs and based on established standards. <i>(Relevant and evidence based)</i>							
Proportion of mental health clients that had a screening assessment within 48 hours (%) ⁷	2011-2012	38.0%	↑	9.0%-67.0%	--	--	--
Quality Dimension – EFFECTIVENESS: The care/service, intervention or action achieves the desired results. <i>(Doing what is required to achieve the best possible results)</i>							
EMR SCORE (Electronic Medical Record Adoption Model score 0 to 7) ⁸	2 nd quarter 2012	3.057	↑	0.326 – 3.347	A+	A+	■
Patients with repeat hospitalizations for mental illness (Risk adjusted %) ⁹	2009-2010	10.4%	↑	12.7-9.6%	A	C	■
Self-Injury Hospitalization (aged-standardized rate per 100,000) ⁹	2010-2011	77	↑	83 - 44	E	F	■
Pain of discomfort that prevents activities (%) ¹⁰	2011	15.9%	↓	16.8% - 11.9%	E	E	■

1. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

2. NB Department of Social Development 2010-2011 in combination with Statistics Canada – Online catalogue 92-591-XWE. <http://www.statcan.gc.ca>

3. Statistics Canada, Canadian Community Health Survey, available through the New Brunswick Department of Health

4. National Physician Survey. <http://www.nationalphysiciansurvey.ca/nps>

5. NB Department of Social Development 2010-2011

6. New Brunswick Department of Health, Extra-Mural Program

7. New Brunswick Department of Health, Mental Health. (range used is New Brunswick Health Zones)

8. HIMSS Analytics™ LLC. <http://www.himssanalytics.org/>

9. Canadian Institute for Health Information - 2012 Health Indicators Report. <https://secure.cihi.ca/estore/productFamily.htm?pf=PFC1791&lang=en&media=0>

10. Statistics Canada, Table 105-0501 . <http://www.statcan.gc.ca>

2012 – Indicators by Health care sector– SUPPORTIVE/SPECIALTY: The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.							
Indicators	NB Value (2012)		Value Trend	Range of values from other provinces (worse to better value) Or benchmark/target	2012 NB Grade	2011 NB Grade	Grade trend
	Year	Value					
Quality Dimension –EFFICIENCY: Achieving the desired results with the most cost-effective use of resources. <i>(Making the best use of the resources)</i>							
Number of exams done by CAT (CT) scanners (rate per 1,000 population)* 1	2010-2011	196	--	98 - 196	--	--	--
Average number of Computed Tomopgraphy (CT) Exams per Scanner (number) 1	2010-2011	8,202	↓↓	6,189 – 10,737	C	A+	■
Number of exams done by Magnetic Resonance Imaging (MRI) scanners (rate per 1,000 population)* 1	2010-2011	50	--	28 - 55	--	--	--
Average number of Magnetic Resonance Imaging (MRI) Exams per Scanner (number) 1	2010-2011	6,261	↑↑	3,267 – 7,571	B	E	■
Average number of days to complete long term care generic assessment (days) 2	2011-2012	24.36 days	↑↑	--	--	--	--
Quality Dimension – SAFETY: Potential risks of an intervention or the environment are avoided or minimized. <i>(Keeping people safe)</i>							
% of patients who reported staff talking about all the medications they were taking through EMP3 (NEW)	2012	72.3%	--	--	--	--	--
Intentional self-harm (suicide) age-standardized mortality rate (rate per 100,000)4	2009	10.4	↑↑	15.5 – 8.5	A	F	■

1. Canadian Institute for Health Information –National Survey of Selected Medical Imaging Equipment, 2011. http://www.cihi.ca/CiHI-ext-portal/xlsx/internet/STATS_MIT_2011_EN

2. New Brunswick Department of Social Development

3. New Brunswick Health Council. Home Care Survey (2012). http://www.nbhc.ca/home_care_survey.cfm

4. Statistics Canada, Table 102-0552. <http://www.statcan.gc.ca>

2012 – Indicators by Health care sector– SUPPORTIVE/SPECIALTY: The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.		
Quality Dimension – EQUITY: Providing quality care 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. (Aiming for equitable care and services for all)		
Indicators	NB Value	1 = difference is statistically significant
Overall rating for home healthcare services (EMP) received (% 8, 9, or 10 on a scale of 0 to 10) ¹	96.7%	
rural	96.7%	0
urban	96.8%	
Aboriginal	92.1%	1
non-aboriginal	96.9%	
French	97.6%	0
English	96.5%	
Male	96.5%	0
Female	96.8%	
Under 65	94.2%	1
65-74	97.2%	
75+	98.1%	
8th grade or less	97.9%	1
some high-school	97.8%	
high-school, GED	97.4%	
Post-secondary	95.4%	
Less than \$25,000	96.3%	0
\$25,000 or more	97.0%	

1. New Brunswick Health Council. Home Care Survey (2012). http://www.nbhc.ca/home_care_survey.cfm

2012 – Indicators by Health care sector– SUPPORTIVE/SPECIALTY:		
The care received in the community or as an out-patient to prevent, control, or relieve complications and/or side effects and to improve the citizen's comfort and quality of life.		
Quality Dimension – EQUITY: Providing quality care 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. (Aiming for equitable care and services for all)		
Indicators	NB Value	1 = difference is statistically significant
Overall rating for home support services received (% 8, 9, or 10 on a scale of 0 to 10) ¹	87.9%	
rural	90.4%	1
urban	85.2%	
Aboriginal	91.0%	0
non-aboriginal	87.9%	
French	87.3%	0
English	88.2%	
Male	89.4%	0
Female	87.3%	
Under 65	84.8%	1
65-74	90.2%	
75-84	88.5%	
85+	90.0%	
8th grade or less	90.1%	1
some high-school	90.4%	
high-school, GED	84.0%	
Post-secondary	86.3%	
Less than \$25,000	87.8%	0
\$25,000 or more	87.2%	

	2012 Grade	2011 Grade	Grade Trend
Overall Performance Index	B	B	

1. New Brunswick Health Council. Home Care Survey (2012). http://www.nbhc.ca/home_care_survey.cfm

Appendix: List of Causes of Death for Avoidable Mortality Indicator (CIHI, 2012)

Cause of Death	Preventable (Incidence Reduction)	Treatable (Case Fatality Reduction)
Infections		
Enteritis and other diarrhoeal disease	x	
Tuberculosis		x
Vaccine-preventable diseases	x	
Selected invasive bacterial infections		x
Sepsis		x
Malaria		x
Meningitis		x
Cellulitis		x
Pneumonia		x
Sexually transmitted infections, except HIV/AIDS	x	
Viral hepatitis	x	
HIV/AIDS	x	
Neoplasm		
Lip, oral cavity and pharynx cancer	x	
Esophageal cancer	x	
Stomach cancer	x	
Colorectal cancer		x
Liver cancer	x	
Lung cancer	x	
Melanoma skin cancer	x	
Non-melanoma skin cancer	x	
Malignant neoplasm of breast		x (Female only)
Cervical cancer		x
Uterus cancer		x
Testicular cancer		x
Bladder cancer		x
Thyroid cancer		x
Hodgkin's disease		x
Leukemia		x (Age <45)
Benign neoplasms		x

Cause of Death	Preventable (Incidence Reduction)	Treatable (Case Fatality Reduction)
Diseases of the Circulatory System		
Rheumatic heart disease	x	
Hypertensive diseases		x
Cerebrovascular diseases	x (50%)	x (50%)
Ischaemic heart disease	x (50%)	x (50%)
Other atherosclerosis	x (50%)	x (50%)
Aortic aneurysm	x	
Venous thromboembolism	x	
Diseases of the Respiratory System		
Chronic obstructive pulmonary disorders	x	
Asthma and bronchiectasis		x
Acute lower respiratory infections		x
Upper respiratory infections		x
Lung diseases due to external agents	x	
Adult respiratory distress syndrome		x
Pulmonary oedema		x
Abscess of lung and mediastinum; pyothorax		x
Other pleural disorders		x
Other respiratory disorders		x
Diseases of the Digestive System		
Peptic ulcer disease		x
Diseases of appendix; hernia; disorders of gallbladder, biliary tract and pancreas		x
Chronic liver disease (excluding alcohol-related disease)	x	
Diseases of the Genitourinary System		
Nephritis and nephrosis		x
Renal failure		x
Obstructive uropathy, urolithiasis and prostatic hyperplasia		x
Inflammatory diseases of genitourinary system		x
Disorders resulting from impaired renal tubular function		x

Cause of Death	Preventable (Incidence Reduction)	Treatable (Case Fatality Reduction)
Infant and Maternal Causes		
Complications of the perinatal period	x	x
Congenital malformations, deformations and chromosomal anomalies		x
Pregnancy, childbirth and the puerperium		x
Unintentional Injuries		
Transport accidents	x	
Falls	x	
Other external causes of accidental injury	x	
Drowning	x	
Fires and flames	x	
Accidental Poisonings	x	
Injuries of Underdetermined Intent		
Injuries of undetermined intent	x	
Intentional Injuries		
Suicide and self-inflicted injuries	x	
Assault	x	
Alcohol and Drug Use Disorders		
Alcohol-related diseases, excluding external causes	x	
Drug use disorders	x	

Cause of Death	Preventable (Incidence Reduction)	Treatable (Case Fatality Reduction)
Nutritional, Endocrine and Metabolic Disorders		
Nutritional deficiency anemia	x	
Thyroid disorders		x
Diabetes mellitus	x (50%)	x (50%)
Adrenal disorders		x
Congenital metabolic disorders		x
Neurological Disorders		
Epilepsy		x
Disorders of Musculoskeletal System		
Osteomyelitis		x
Adverse Effects of Medical and Surgical Care		
Drugs, medicaments and biological substances causing adverse effects in therapeutic use	x	
Misadventures to patients during surgical and medical care	x	
Medical devices associated with adverse incidents in diagnostic and therapeutic use	x	
Surgical and other medical procedures as the cause of abnormal reaction	x	