
# Improving Access and Delivery of Primary Health Care Services in New Brunswick

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Submitted by the

Primary Health Care Advisory Committee (PHCAC)

New Nouveau Brunswick

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## Glossary of Acronyms

| | |
|---|---|
| CCHS | Canadian Community Health Survey |
| CCM | Chronic Care Model |
| CFPC | College of Family Physicians of Canada |
| CHC | Community Health Center |
| CIHI | Canadian Institute of Health Information |
| CSDS | Client Services Delivery System |
| CMHC | Community Mental Health Centres |
| DEC | Diabetes Education Clinics |
| DoH | Department of Health |
| EHR | Electronic Health Record |
| EMR | Electronic Medical Record |
| FP | Family Physician |
| GP | General Practitioner (Family Physician) |
| HIS | Hospital Information System |
| NBers | New Brunswickers |
| NP | Nurse Practitioner |
| NGO | Non government organization |

Medical Home – a patient-centred medical care setting that includes the following features: 1) patients have a family physician who provides and directs their medical care; 2) care is for the patient as a whole 3) care is co-ordinated, continuous and comprehensive with patients having access to an inter-professional team; 4) there is enhanced access for appointments; 5) well supported information technology, including a electronic medical record 6) remuneration supports the model of care 7) quality improvement and patient safety are key objectives 8) serves as the central hub for the provision and co-ordination of health care services needed by each of the patients[1]

| | |
|---|---|
| PHC | Primary Health Care |
| PHCAC | Primary Health Care Advisory Committee |
| PHCTF | Primary Health Care Transition Fund |
| RASS | Regional Addictions Services System |
| RHA | Regional Health Authority |

1 College of Family Physicians of Canada (October 2009) Patient-centred primary care in Canada – Bring it on home (Discussion Paper) http://www.cfpc.ca/local/files/Communications/Health%20Policy/Bring%20it%20on%20Home%20FINAL%20ENGLISH.pdf

## Executive Summary

Over the past decade, Canadian federal and provincial governments have devoted significant resources to studying ways to renew and re-orient health care service delivery to ensure a sustainable and effective system. Despite our national investment in health services, we have significant challenges related to the deteriorating health status of our population, the on-going escalation of the health care budget, and the issue of timely access to health care services.

The significance of primary health care as a key component of managing the escalation in health-care costs was first introduced in the **Lalonde report**[2] in 1974, entitled *A new perspective on the health of Canadians*. Almost thirty years later, similar recommendations were urged in the Romanow report on the future of health care in Canada. The provincial government has recognized that decisive action is needed because our health care system will face extraordinary challenges in the coming decades, and we will need an innovative and effective health care system in order to provide sustainable clinical health services.

Chronic diseases are now the most significant cost driver in the health care system. The Canadian Community Health Survey (CCHS, cycle 3.1) indicated that 72 per cent of New Brunswickers over the age of 18 self-reported living with a chronic health condition. Of these, 38 per cent reported living with one of the select chronic conditions profiled by the Health Quality Council[3]. One-third of Canadians reported at least one of seven select physical and/or mental chronic health conditions.[4] Canadians with chronic illnesses accounted for 51 per cent of family physician consultations, 55 per cent of specialist consultations, 67 per cent of nursing consultations, and 72 per cent of nights spent in hospital.[5]

Within New Brunswick, the Minister of Health established a working committee of key stakeholders, known as the Primary Health Care Advisory Committee (PHCAC), to develop and implement new ways of improving access and delivering primary or 'first contact' health.

2. http://www.hc-sc.gc.ca/hcs-sss/com/fed/lalonde-eng.php

3. Internal communication DoH NB John Boyne.

4. Ibid p. 17.

5. Health Council of Canada. (2007). Population Patterns of Chronic Health Conditions in Canada: A Data Supplement to Why Health Care Renewal Matters: Learning from Canadians with Chronic Health Conditions. Toronto: Health Council p. 16. www.Healthcouncilcanada.ca

**Primary health care (PHC)** *is usually the first place people go when they have health concerns, often to a general practitioner (GP) or family physician (FP). PHC typically includes routine care, care for urgent but minor or common health problems, mental health care, maternity and child care, psychosocial services, liaison with home care, health promotion and disease prevention, nutrition counseling, and end of life care. PHC is also an important source of chronic disease prevention and management and may include other health professionals such as nurses, nurse practitioners, dietitians, physiotherapists, and social workers.*[6]

Based on the National Primary Health Care Awareness Strategy, the four "pillars" or elements, recognized as key building blocks for a conceptual understanding of PHC, are: *Access, Teams, Timely Information*, and *Healthy Living*[7]. The committee reviewed and analyzed issues under each pillar and identified inefficiencies and opportunities for improvement that would strengthen the primary health care system.

Access is a key concern for New Brunswickers. Appropriate and affordable access is the cornerstone of a successful and sustainable primary health care service. Family physicians were traditionally responsible for the primary care delivery. NB Medicare information from 2007 was used to profile primary care access. This effort demonstrated that secondary analysis of an administrative data base could generate surveillance data that was valuable in understanding health system utilization and access. In general, young families appeared to have the most difficulty accessing primary health care. After Hour clinics appeared to fill an important need for primarily young families in providing evening and weekend access to primary care. Most seniors appeared to have a family physician which may be related to concomitant chronic diseases requiring more frequent management. The province was an early adopter of technology and has integrated a Tele-care system that appeared to be an important resource point for mothers of young children. The mix of family physicians and the primary location of practice appeared to be strong influences in access patterns.

The philosophy of PHC shifts the emphasis of health care away from hospitals and into the community, where the family physician supports the continuum of care, linking community and hospital. Patients would benefit from improved access to screening, health promotion, and self-management supports

There are numerous examples of formal and informal teams in New Brunswick. On an informal level, family physicians have developed a loose network of support in some communities with other service providers either in the hospital system or private

6. CIHI. (July 2009) Experiences with primary heath care in Canada
http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

7. Health Canada Primary Health Care Transition Fund, National Primary Health Care Awareness Strategy Fact Sheet (2009)
http://www.apps.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/pchtf.nsf/WebFactSheet_E/0034?OpenDocument

sector. While useful, this support is typically in the form of referrals with a parallel rather than integrated approach. In 2007, NB already had an extensive network of community- based health service sites, staffed with a multidisciplinary primary health care team. This included eight CHCs including 14 Community Mental Health Centres (CMHC) and satellite clinics, 20 health service centers, 26 Extramural offices, 10 public health offices, one collaborative practice and 15 federally funded First Nation health centres. However the vast majority of family physicians did not work within a formal team.

New Brunswick must develop networks of primary health care teams, creating innovative service delivery models that will ensure that all New Brunswickers have access to a family physician supported by an interdisciplinary primary health care team. Family physicians working in private practices have indicated that working within a team of allied health care providers would benefit the patient and the health care system.

Primary health-care providers currently work with a variety of information modalities in health care delivery. Multiple access points provide the patient with alternate entries to the health care system; however communication, or the sharing of information among service points, is a common challenge. There is no common central agency responsible for these information systems. The challenge of tracking patient information across electronic repositories that are neither inter-faced, nor share common minimum data sets and data definitions, is self-evident. In fact, recognizing that patient records may exist in all these sites, with care provided through disconnected agencies with no common portal among them, highlights the challenge that exists in managing patient care with electronic files. This is further exacerbated by a paper-world that co-exists.

There is an obvious need for effective and efficient communication processes for all stakeholders and for record-keeping processes that build cumulative health records. Reliable and valid information on health care delivery processes is also necessary for appropriate planning and on-going quality improvement. The importance of credible and timely information is paramount to effective care for the individual, and is especially critical to enabling providers to collaborate.

The original Wellness Strategy was introduced in 2006 to help promote better connections and provide support to improve wellness within the province. The Provincial Wellness Strategy entitled *Live Well, Be Well*; *New Brunswick's Wellness Strategy 2009-2013*, is an enhanced four-year strategy that builds upon the previous strategy. It is intended to accelerate progress on wellness in New Brunswick schools, communities, homes and workplaces. This strategy identified the following overall goals for all New Brunswickers: improved mental fitness and resilience, increased

physical activity levels, increased rates of healthy eating and increased rates of people living tobacco-free. The provincial government promoted an awareness of the causes of such conditions. Community based, healthy living programs that impact early childhood development, healthy aging, and wellness encouraged citizens to adopt healthier lifestyles.

The wellness of New Brunswickers is affected by interactions between social and economic factors, the physical environment and individual behaviours. The continuous improvement of our population health and wellness necessitates a focused, collaborative approach. Healthy living initiatives are intended to take a multi-dimensional approach which ensures that the root causes of problems or issues are addressed; special needs and vulnerabilities of sub-populations are considered and supported; and partnership, co-operation and community engagement with a wide variety of sectors is valued and leveraged. In addition, ongoing leadership and engagement at local, regional and provincial levels are considered crucial ingredients for achieving wellness. Everyone can be an active participant in and a contributor to wellness within New Brunswick homes, communities, schools, and workplaces.

The basic components that support an energized and sustainable primary health care system were carefully considered. Our recommendations are fairly simple, but we believe these provide adequate direction for New Brunswick, while allowing the flexibility to make course adjustments. We have one overarching strategic approach, which is supported by 12 actions.

## All New Brunswickers will have access to a family practice team that is able to provide them with, personalized, comprehensive and co-ordinated primary health care services.

1. **All New Brunswickers must have access to a family physician.**
2. **Establish family practice teams with a minimum core staff of a family physician, a nurse and/or nurse practitioner with appropriate administrative support that will provide a 'medical home' for their registered patient population.**
3. **Develop methodologies and infrastructure to provide the family practice team with basic information concerning the practice health care needs (a practice panel) as well as the community's population health baseline and benchmarks.**
4. **Establish a staffing model that will enable the family practice team to expand with required allied health care providers to optimize service delivery to the registered patient population within the 'medical home'.**

5. **Explore alternative pay and remuneration models that will attract and retain skilled professionals in the family practice teams.**
6. **Create funding models that will support adoption of electronic medical records to meet the information needs of the family practice team.**
7. **Establish a provincial, interprofessional continuing education program that will enable family practice teams to develop the appropriate cognitive, behavioural and attitudinal skill sets needed to optimally manage within team-based practices.**
8. **Ensure that these sites provide opportunity for interprofessional clinical practicum opportunities.**
9. **Continue and expand funding models that support adoption of telehealth technologies to enable patients to receive as much care as possible within their 'medical home'.**
10. **Develop processes to ensure that the 'community leaders' and 'family practice teams' regularly meet to identify and collaborate on issues that impact the population's health.**
11. **Establish a provincial blueprint and action plan that will provide direction on the roll-out of these teams across the province including processes regarding governance and lines of reporting and accountability across the medical home, regional health authority and the Department of Health**
12. **Invest in and promote primary prevention of disease and injury, healthy lifestyles and healthy environments in homes, communities, schools and workplaces.**

The PHCAC believes that this principle goal with the 12 strategic actions, will provide a stable and sustainable foundation for positive change in primary health care delivery.

# SECTION 1
# INTRODUCTION

## Background

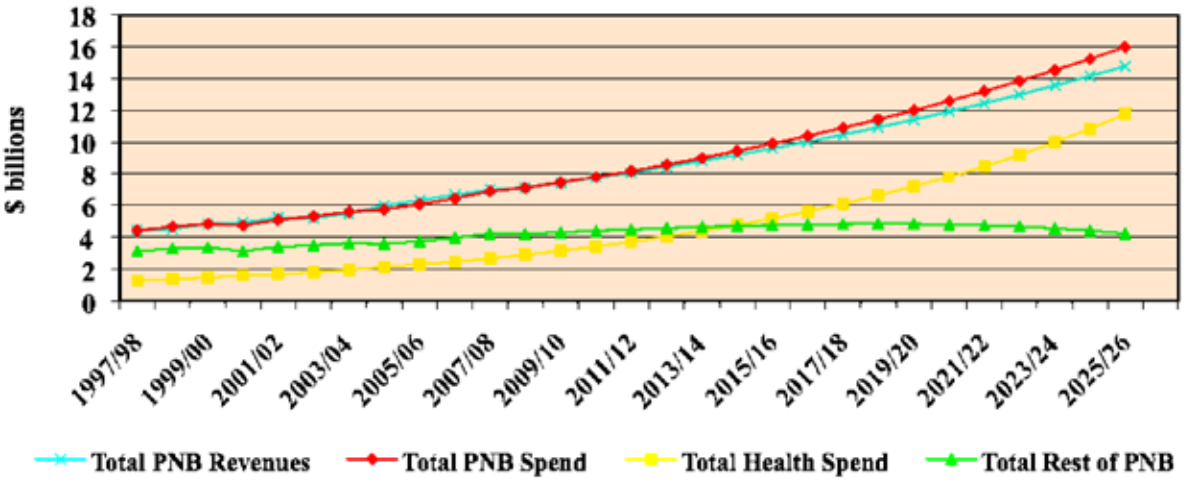
Over the past decade, Canadian federal and provincial governments have devoted significant resources to studying ways to renew and re-orient primary health care to ensure a sustainable and effective health care system. A cornerstone of Canadian health care is access to medical and hospital services, and our Medicare system is recognized globally as a Canadian attribute. Despite our investment in health services, we have significant challenges related to the deteriorating health of our population, the on-going escalation of costs, and the issue of timely access to health care service. National dialogue has focused on where we are now in health service delivery, where we want to go, and how we will achieve this goal. This discussion has involved all stakeholders. There has been a core commitment to move beyond rhetoric with solid action plans and measurable outcomes. Our focus on 'fix-it' medicine has fostered tremendous progress in diagnostics and treatments, consuming the majority of resources. New Brunswick has added nurse practitioners and 79 additional family physicians to the health care system. The province introduced French and English medical schools and nurse practitioner programs within the province, and added additional undergraduate nursing seats and licensed practical nursing programs. Despite this significant investment, patients continue to identify challenges in accessing primary care, general health status is deteriorating and there has been minimal progress in re-engineering the health care system to prevent illness as well as to manage chronic or non-curable diseases.

### The New Brunswick primary health care system is faced with a:

- human resource imperative as we cope with the challenge created by the 1990s cutbacks to health care education such as medicine and nursing, coupled with a graying workforce
- fiscal imperative - the rate of growth in health care spending is estimated to exceed 50 per cent of total PNB spending by 2014-15 (Figure 1)
- moral imperative as the health of our population continues to decline, largely due to the social environment and lifestyle choices[8]

8. Conference Board of Canada (September 2009) How Canada Performs – Health Accessed March 2, 2010
http://www.conferenceboard.ca/HCP/Details/Health.aspx#score

**Figure 1: New Brunswick Health Care budget as per cent of overall budget[9]**




Chronic disease dominates the landscape and they are the most significant cost driver in the health care system.[10] These are diseases that persist, are associated with risk factors, impact day-to-day functioning and require management of the condition over time. In 2007, the Health Quality Council[11] released a series of reports on patterns and prevalence of health and health care use by Canadians with select chronic illnesses with data gathered from the Canadian Community Health Survey (CCHS) The CCHS provides population-level information gathered through self-report surveys on health determinants, health status and health system utilization. This ongoing series of surveys is a joint effort of Health Canada, Statistics Canada and the Canadian Institute for Health Information (CIHI).[12]

One third of Canadians reported at least one of seven select physical and/or mental chronic health conditions.[13] Canadians with chronic illnesses accounted for 51 per cent of family physician consultations, 55 per cent of specialist consultations, 67 per cent of nursing consultations, and 72 per cent of nights spent in hospital.[14] Many Canadians indicated that it is difficult to have timely appointments with their family physician and as a result there is a heavy reliance on hospital emergency rooms

9. NB Department of Health (2009) personal communication Financial Services.

10. NB Department of Health. 2006. (internal report) A Comprehensive Approach to Chronic Disease Management in New Brunswick.

11. Health Canda, (2007). Why health care renewal matters: learning from Canadians with chronic health conditions. Toronto: Health Council. www.healthcouncil-canada.ca

12. Health Canada, (2007) http://www.hc-sc.gc.ca/fn-an/surveill/nutrition/commun/index-eng.php

13. Ibid p. 17.

14. Health Council of Canada. (2007). Population Patterns of Chronic Health Conditions in Canada: A Data Supplement to Why Health Care Renewal Matters: Learning from Canadians with Chronic Health Conditions. Toronto: Health Council p. 16. www. Healthcouncilcanada.ca

for primary health care needs As well, they rarely had access to a health care team, although the importance has been well documented for optimal comprehensive care.[15]

Seventy-two percent (72 per cent) of New Brunswickers over the age of 18, self-reported living with a chronic health condition. Fifty eight percent (58 per cent) of youth, age 12-17, reported having a chronic condition with allergies, asthma and back problems being the most common. Seventy four percent (74 per cent) of adults age 18 and older reported a chronic condition, with arthritis, high blood pressure and asthma being the most common. Although poorly acknowledged, mental health issues are a significant stressor within primary health care. In New Brunswick, 11.6 per cent reported living with mood or anxiety disorders such as depression and bipolar disorders[16]. In a recent review of select primary care family physician practices in Miramichi, mental illnesses were among the most common reasons for a visit.[17]

Figure 2 shows the breakdown of prevalence of concomitant chronic diseases in individuals by Zone. Having more than one chronic illness is linked to higher utilization of health care services. The 2007 report, Learning from Canadians with Chronic Health Conditions by the Health Council of Canada, studied in detail population patterns of 7 select conditions that were either high prevalence / high impact on health care service use;

- 68 per cent with no select health condition used 28 per cent of hospital overnights
- 21 per cent with one select condition used 28 per cent of hospital overnights
- 12 per cent with 2 or more conditions used 44 per cent of hospital overnights.[18]

Simply stated, the majority of hospital stays are used by persons with chronic diseases and those with more than one chronic disease, are the highest users.

The elevated percentage of persons in New Brunswick with co-morbid chronic conditons suggests that they will require more access to health care services in the future.

15. A. Shih, K. Davis, S. Schoenbaum, A. Gauthier, R. Nuzum, and D. McCarthy, Organizing the U.S. Health Care Delivery System for High Performance, The Commonwealth Fund, August 2008 http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2008/Aug/Organizing-the-U-S--Health-Care-Delivery-System-for-High-Performance.asp

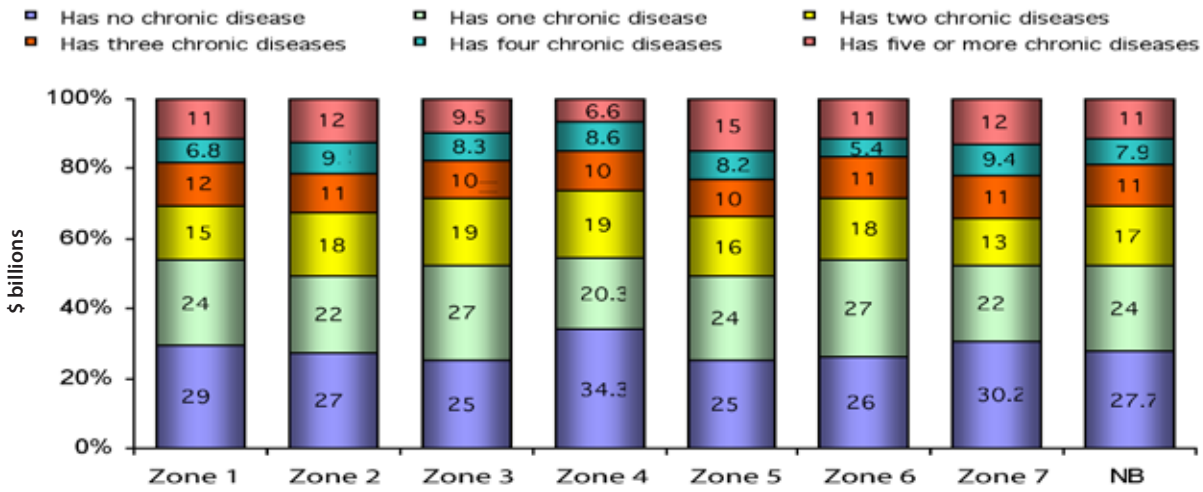
16. Personal communication, R Tervo, Department of Health Statistics Canada, CCHS 4.1, 2007-2008

17. Personal communication, Bronwyn Davies, Director of Primary Health Care Branch, Dept of Health , NB November 2009.

18. Health Council of Canada. (2007). Population patterns of chronic health conditions in Canada. A data supplement to Why Health Care Renewal Matters: Learning for Canadians with Chronic Illnesses. Toronto: Health Council of Canada. (p 12)

## Figure 2: Prevalence of chronic disease in New Brunswickers

(Statistics Canada, CCHS Cycle 3.1 2005)




The next Figure profiles CCHS data on the five most prevalent chronic diseases reported for the 18+ age group in New Brunswick. In July 2009, CIHI reported that NB had the highest percentage of the population in Canada, with one or more of four select conditions (diabetes, heart disease, hypertension, stroke).[19]

## Figure 3: Five most prevalent chronic illnesses reported in the last 3 months (per cent of Population - Ages 18+)

| | Has Arthritis/ Rheumatism | Has High Blood Pressure | Has Asthma | Has Heart Disease | Has Diabetes |
|---|---|---|---|---|---|
| **Zone 1** | 19.7% | 19.9% | 6.9% | 8.1% | 7.2% |
| **Zone 2** | 28.3% | 23.8% | 9.6% | 6.8% | 6.3% |
| **Zone 3** | 20.4% | 20.2% | 7.1% | 6.6% | 5.6% |
| **Zone 4** | 19.4% | 19.4% | 6.5% | 6.0% | 6.5% |
| **Zone 5** | 27.9% | 28.8% | 7.0% | 10.7% | 5.7% |
| **Zone 6** | 19.9% | 21.6% | 8.7% | 7.1% | 7.0% |
| **Zone 7** | 20.7% | 24.4% | 10.4% | 9.6% | 9.7% |
| **NB** | 22.2% | 21.7% | 8.0% | 7.4% | 6.7% |

Source: Statistics Canada, CCHS Cycle 3.1, 2005

19. Statistics Canada (July, 2009) CIHI - Experiences with Primary Health Care in Canada
http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

The demographic shift will introduce additional challenges in primary health care. As we age, the incidence of chronic disease escalates. Statistics Canada projects that there will be almost double the number of seniors by 2026, regardless of immigration into the province.[20] Statistics Canada has developed six scenarios considering both migration, immigration along with birth and death statistics in projecting population changes. Regardless of these considerations, it is evident that New Brunswick is expected to double the percentage of seniors in the next 20 years. The higher prevalence of chronic disease in seniors will be further exacerbated with the addition of dementias which are expected to rise, simply due to more people living longer.

**Figure 4: Percentage of persons aged 65 years and over observed (2005) and projected (2031) according to six scenarios, Canada, provinces and territories.**

| | | Scenario (2031) | | | | | |
|---|---|---|---|---|---|---|---|
| | 2005 | 1 | 2 | 3 | 4 | 5 | 6 |
| | in percentage | | | | | | |
| **Canada** | **13.1** | **24.4** | **23.4** | **23.4** | **23.4** | **23.4** | **22.5** |
| Newfoundland and Labrador | 13.1 | 29.7 | 30.3 | 29.5 | 28.8 | 32.8 | 29.0 |
| Prince Edward Island | 14.1 | 27.2 | 26.5 | 26.4 | 26.2 | 26.6 | 25.8 |
| Nova Scotia | 14.2 | 28.6 | 28.6 | 28.1 | 27.8 | 28.4 | 27.5 |
| New Brunswick | 13.9 | 28.9 | 29.1 | 28.6 | 28.2 | 28.8 | 28.1 |
| Quebec | 13.8 | 26.4 | 25.4 | 25.3 | 25.3 | 25.7 | 24.5 |
| Ontario | 12.8 | 23.2 | 21.8 | 22.1 | 22.4 | 21.9 | 21.1 |
| Manitoba | 13.5 | 22.7 | 21.5 | 21.7 | 22.1 | 21.5 | 21.0 |
| Saskatchewan | 14.8 | 25.4 | 24.8 | 25.0 | 25.2 | 23.4 | 24.3 |
| Alberta | 10.5 | 22.0 | 20.8 | 21.4 | 22.1 | 20.6 | 20.7 |
| British Columbia | 13.8 | 25.4 | 25.4 | 24.1 | 22.8 | 25.3 | 23.0 |
| Yukon | 6.9 | 20.9 | 24.1 | 19.8 | 16.5 | 23.0 | 18.6 |
| Northwest Territories | 4.7 | 16.0 | 16.4 | 15.2 | 13.9 | 16.6 | 14.1 |
| Nunavut | 2.6 | 6.0 | 4.7 | 5.7 | 6.9 | 6.3 | 5.3 |

Source: Statistics Canada http://www.statcan.gc.ca/pub/91-520-x/00105/4167814-eng.htm

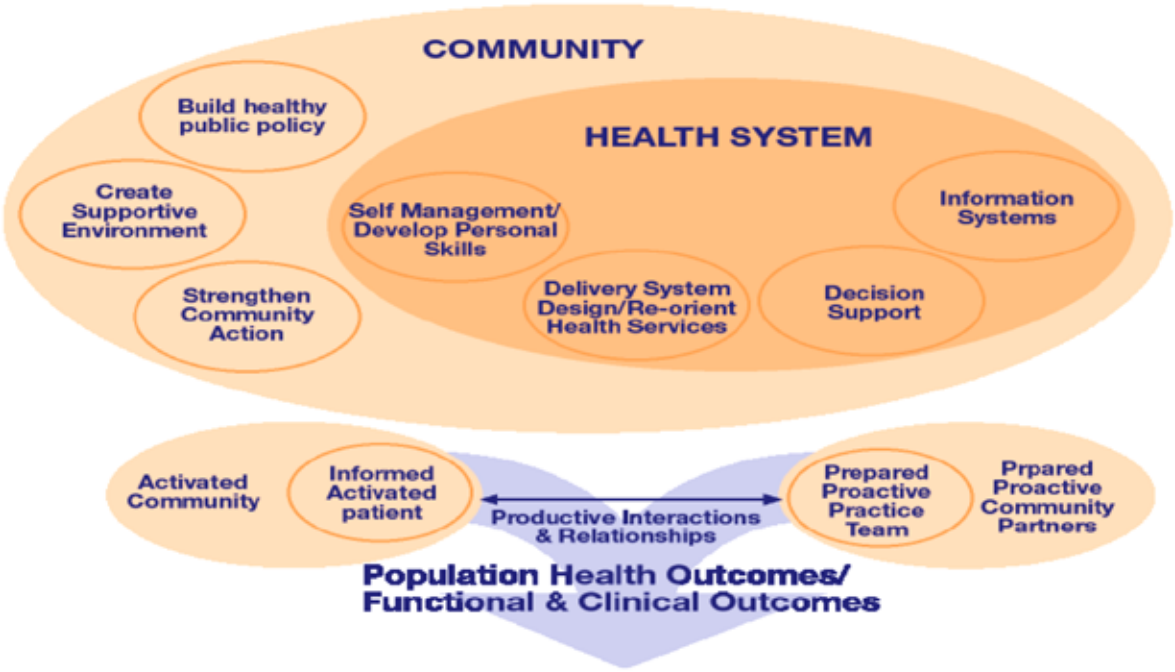
In the late 1990s, the Robert Wood Johnson Foundation sponsored the work of Dr E. Wagner, to explore and evaluate the development of an effective clinically-oriented system framework to support the care of persons with chronic illnesses. This led to the Chronic Care Model (CCM), which integrates multiple components to improve the management of patients with chronic illnesses.[21] Since 2000, this model has been widely utilized and the results studied. Some key highlights of these studies include:

20. Statistics Canada (2005). Population projections for Canada, provinces and territories 2005—2031. catalogue # 91-520-XIE http://www.statcan.gc.ca/pub/91-520-x/00105/4167814-eng.htm

21. http://www.improvingchroniccare.org/change/index.html

- patients with diabetes had significant decreases in their risk of cardiovascular risk
- congestive heart failure patients were more knowledgeable, followed their treatment plans better and had 35 per cent fewer days in hospital
- asthma and diabetes patients were more likely to receive the appropriate treatment

**Figure 5: Expanded Chronic Care Model**




**Created by: Victoria Barr, Sylvia Robinson, Brenda Narln-Link, Lisa Underhill, Anita Dotts and Darlene Revenadale (2002)**
Adapted from Glasgow, FLorleans, C., Wagner, E., Curry, S., Solberg, L. (2001). Does the the Chronic Care Model also serve as a template for improving. The Milbank Quarterly. 79(4), *and* World health Organization, Health and Welfare Canada and Canadian Public Health Association. (1986). Ottawa Charter of health promotion.

This model incorporates the basic elements necessary for optimizing primary health care services considering the community, the health care service, the practice and the patient levels. It provides a synergistic template for quality improvement in primary health care service delivery. The province has endorsed a Chronic Disease Prevention and Management Framework that provides a detailed description of this model.

The significance of primary health care as a key strategy in managing the escalation in health care costs was first introduced in the **Lalonde report** [22] in 1974, entitled *A new perspective on the health of Canadians*. Almost 30 years later, similar

22. http://www.hc-sc.gc.ca/hcs-sss/com/fed/lalonde-eng.php

recommendations were urged in the Romanow report on the future of health care in Canada, Building on values, the future of health care...

> **Good primary health care is** *based on interdisciplinary teamwork, with care available to all, 24-hours a day, seven days a week. Currently, primary care in Canada is out of balance, concentrating on the entrenched practice of workers with particular skills being assigned to cure people when they are ill. There is not enough focus on broader efforts to prevent illness and injury and keep the population as a whole healthier.*[23]

In February 2009, Judge M. McKee released his report on *Together into the Future, a transformed mental health system for New Brunswick*. He identified that

> *there must be a system we can count on at every point, identifying the need for help and providing the right intervention at the earliest signs of a problem, preventing future problems, supporting and celebrating ongoing recovery and optimizing wellness* [24]

These reports and strategies speak to the ongoing resolve that sustainable health care systems require a renewed primary health care system. The provincial government has recognized that decisive action is needed as our health care system will face extraordinary challenges in the coming decades, and we will need an innovative and effective health care system in order to provide sustainable clinical health services. We need to refocus from a 'find it and fix it' approach in health services to 'prevent it, find it and manage it' in order to ensure that New Brunswickers have a primary health care system that is accessible and sustainable.

The Minister of Health established a working committee, known as the Primary Health Care Advisory Committee (PHCAC). These key stakeholders were mandated to examine the present model of health care delivery and provide advice on how to more effectively deliver Primary Health Care (PHC) in New Brunswick. A list of the members of the PHCAC and Terms of Reference for the Committee are found in **Appendices 1 and 2**.

PHCAC has deliberated extensively with discussions informed by experts in such areas as the management of chronic illnesses, informatics and alternative health care models. Their work dovetails with the *Provincial Health Plan 2008-2012* in which the provincial government has committed to:

> *Build a single, well-integrated provincial system; make better use of scarce resources; modernize our organizational structures; and put greater emphasis on programs and services that will help people stay healthy and better manage chronic health conditions.*[25]

The present document reflects the work of the Committee to date. The committee identifies the following as guiding assumptions throughout their deliberations.

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23. http://www.chsrf.ca/other_documents/romanow/pdf/healthcare_e.pdf

24. Province of New Brunswick, Dept of Health. (February, 2009). Internal report: Together into the future: a transformed mental health system for New Brunswick by Judge M. McKee.

25. Province of NB, (2008) Transforming New Brunswick's Health-care System: The Provincial Helalth Plan 2008-2012. p3

- Improving the health of the New Brunswick population is essential for a thriving, productive and healthy future for the province[26]
- Transforming primary health care services will require innovative changes in structures and will include embracing technology.
- Transforming primary health care services will mean learning how to do processes differently, modernizing organizational structures, working collaboratively with all stakeholders including patients, in both health service delivery as well as in overall direction for healthy public policy in government.
- Transforming primary health care services will go beyond provision of health services, embracing wellness and healthy living, helping people to stay healthy and better manage chronic conditions.
- The primary health care system will make better use of scarce resources, by leveraging the high quality skills and assets that are already present in our foundation;
- Transformed primary health care services will be economically and clinically sustainable, effective, free and universally accessible, capable of meeting the needs of an aging population that is struggling with chronic illnesses.
- Primary health care services will be accessible as close as possible to where New Brunswickers live.
- The Expanded Chronic Care Model provides a strategic framework to build an integrated, synergistic primary health care delivery model that is effective and efficient.

The next section of the Report establishes a definition of primary health care and its foundation, based on the four pillars, as developed by the National Healthcare Awareness Strategy (2005) and endorsed in the *Provincial Health Plan 2008-2012*.

26. Ibid. p2

# SECTION 2
# PRIMARY HEALTH CARE

## What is primary health care?

> **Primary health care is** *usually the first place people go when they have health concerns, often to a general practitioner (GP) or family physician (FP). PHC typically includes routine care, care for urgent but minor or common health problems, mental health care, maternity and child care, psychosocial services, liaison with home care, health promotion and disease prevention, nutrition counseling, and end of life care. PHC is also an important source of chronic disease prevention and management and may include other health professionals such as nurses, nurse practitioners, dietitians, physiotherapists, and social workers.*[27]

It recognizes the social determinants that greatly influence health and wellness including income, housing, education, and environment. Primary care is the element within primary health care that focuses on health care services, including health promotion, illness and injury prevention, and the diagnosis and treatment of illness and injury.

## Who offers primary health care services?

Historically, family physicians were the cornerstone in primary care service delivery Decima Research found that the majority of Canadians (88 per cent) in 2004 believed having a family physician allowed them to feel more confident in their ability to access appropriate and timely care. This finding has been confirmed by other studies.[28] Primary health care service has expanded to include community-based services offered by a broad range of health care providers including nurses, pharmacists, dietitians, psychologists and physiotherapists, social workers, mental health counselors, etc.

The inclusion of a range of health care providers implies the need for teamwork. PHC is premised on the notion of inter-professional coordination and collaboration between care providers. This is more than simply sharing information among health care providers and considers:

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27. CIHI. (July 2009) Experiences with primary heath care in Canada
http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

28. Decima Research. Decima express national telephone omnibus. Toronto: Decima Research; 2004 as referenced in
http://www.cfpc.ca/local/files/PCWTP%20Discussion%20Paper%20v3.pdf

*…the strengths and assets of the individual and community, responds to the identified needs, maximizes involvement of community, includes all relevant sectors while avoiding duplication of services (i.e. an effective use of service providers), and uses only health technologies that are accessible, acceptable, affordable and appropriate.* [29]

More recently, the concept of primary health care services has embraced the broader understanding of population health and the social determinants of health, which have historically been viewed as the domain of public health practice. Primary health care providers actively contribute to the public health agenda through such involvements as surveillance and reporting notifiable diseases and events, identifying trends and emerging issues, advocating for healthy public policies, supporting the creation of physical and social environments conducive to health, screening for chronic diseases, administering immunizations, encouraging and supporting healthy behaviours and contributing to disaster response. Today's PHC practitioners open the door to community involvement through a variety of partnerships including but not limited to industry, local government, public service agencies, faith organizations, non-government organizations (NGOs) and interested lay persons. These partnerships enable the PHC team to better identify community needs and liaise with available resources in order to improve health outcomes.

## How does primary health care work?

At present, primary health care services are delivered chiefly by family physicians. In July 2009, the Canadian Institute for Health Information (CIHI) reported that 92 per cent of New Brunswickers reported that they had a regular family doctor based on 2007 CCHS information.[30] Family physicians provide prevention, investigation, and diagnostic intervention in concert with acute and chronic management of all illnesses as well as promoting wellness. The current model is resourced based on the diagnosis and treatment of illness. For example, the Medicare fee for service funding model does not have specific billing codes for prevention-related services such as periodic check ups because these are not explicitly insured. In spite of this challenge, the province's family physicians continue to be among the most comprehensive service providers for individuals and small groups with the least complaints of difficulty accessing routine or ongoing care in Canada, within acceptable wait times.[31, 32]

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29. College of Medicine, University of Saskatchewan. http://www.medicine.usask.ca/research/health-research-groups/primary-health-care-research

30. CIHI, (July 2009) Experiences with primary health care in Canada, p.6 http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

31. National Family Physician Workforce Survey (Janus Survey). 2001 Canadian Medical Association

32. CIHI, (July 2009) Experiences with primary health care in Canada, http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

## Where is primary health care reform?

Both the Romanow Report [33] and the Health Council of Canada Report on Accelerating Change[34] highlighted the need to reorganize how primary health care services work. Concerns included:

- lack of continuity, with various providers and institutions often appearing to work in isolation from one another
- providers' concerns regarding their working conditions, including long hours and impacts on their own health and family life
- the relative lack of emphasis on health promotion and disease prevention, which has been linked to high rates of seemingly, preventable illness;
- problems with access, particularly in rural and remote areas, but also in urban centers where the lack of after-hours access to providers often results in the use of emergency rooms for non-urgent care; [35]
- the inability of Canadians to have access to primary health care teams, working together to address the patients' health needs, 24/7, supported by accessible comprehensive health information.

These problems continued to be validated in later reports.

From 2000 to 2006 the national Primary Health Care Transition Fund (PHCTF)[36] supported a number of innovative PHC projects in New Brunswick as well as across Canada. New Brunswick introduced the community health centre (CHC) model with the following key features:

- the creation of primary health care teams within community health centers which would be responsible for providing comprehensive services to their patients (including coordination with other levels of care);
- the enhancement of telephone advice lines to provide 24-hour first-contact services;
- improvements in the management of chronic diseases
- a greater emphasis on health promotion and illness/injury prevention;
- voluntary participation by providers and patients alike;
- capacity-building in evaluation, so that system performance may be monitored;
- an explicit focus on change management activities to support all of the above.

33. www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/romanow-eng.php
34. http://www.healthcouncilcanada.ca/en/index.php?option=com_content&task=view&id=32&Itemid=32
35. http://www.hc-sc.gc.ca/hcs-sss/prim/about-apropos-eng.php
36. http://www.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/index-eng.php

There is considerable opportunity to leverage the lessons learned, and tools developed both in New Brunswick and elsewhere to further enable team development and primary health care reform.

It is relevant to note that New Brunswick has an extensive network of community-based health service sites apart from CHCs including Community Mental Health Centres (CMHC) and satellite clinics, health service centers, collaborative practices involving nurse practitioners and extramural sites. Many of these demonstrate best practices in primary health care service delivery. The table below summarizes the staffing patterns in each of these sites. It is important to note that specific sites may have had variations of this model. At this time there was one collaborative practice funded through medicare with a nurse practitioner, as well as the staffing detailed below.

**Figure 6: Overview of community based services offered by the RHAs and health care provider staffing makeup**
(not all positions were staffed at all of the sites)

| | 14 Community Mental Health Clinics | 10 Public Health Offices | 8 Community Health Centres | 20 Health Service Centres | 26 Extramural Offices | 1 Collaborative practice-(medicare) |
|---|---|---|---|---|---|---|
| HUMAN SERVICES COUNSELLOR | √ | | | | | |
| PSYCHOLOGIST | √ | | | | | |
| PSYCHOMETRIST | √ | | | | | |
| SOCIAL WORKER | √ | | √ | | √ | |
| DIETITIAN | | √ | √ | | √ | |
| REGISTERED NURSE | √ | √ | √ | √ | √ | |
| PHYSICIAN | √ | | √ | √ | | √ |
| LICENSED PRACTICAL NURSE | √ | | √ | √ | √ | |
| PHYSIOTHERAPIST | | | √ | | √ | |
| NURSE PRACTITIONER | | | √ | | | √ |
| OCCUPATIONAL THERAPIST | √ | | √ | | √ | |
| RESPIRATORY THERAPIST | | | √ | | √ | |
| SPEECH LANGUAGE PATHOLOGIST | | | | | √ | |
| AUDIOLOGIST | | | | | √ | |
| PATIENT SERVICE WORKER | √ | | | √ | √ | |
| REHAB ASSISTANT | | | √ | | √ | |
| RECREATIONAL THERAPIST | √ | | | | | |
| SPECIAL ED TECHNICIAN | √ | | | | | |
| PHARMACIST | | | √ | | | |
| PHARMACY TECHNICIAN | | | | | √ | |

Source: Primary Job Classifications for specified facilities during fiscal year 2007-08 New Brunswick HRDB Dept of Health

## A Conceptual Blueprint for Primary Health Care Reform

With funding from the PHCTF, a national working group developed a social marketing strategy to raise awareness about the role and importance of primary health care in the health care delivery system. A four-pillar concept was created after extensive study. The four "pillars" or elements, that resonated with the public as key components of PHC, were: Access, Teams, Timely Information, and Healthy Living[37]. The essence of each of these elements is described briefly as follows:

> **Access** *means that the individual has the right care, by the right provider, at the right time and place. It begins with the individual seeking help in meeting their 'everyday' health care needs. This is usually the first access to the health care system, most often through the family physician or other medical practitioner but could also involve an alternative means such as telephone advice and clinics, and from there, access to an array of services that are needed in a timely manner.*
>
> **Teams** *define an approach whereby health care providers work together to give timely and efficient care, sharing responsibility for the patient. PHC embraces the concept of a 'team' or 'network' of health care providers and agencies working together on the patient's behalf, to co-ordinate care across the health care system from counseling patients on how to stay healthy, to treating illnesses, providing hospital care, follow up home care, and monitoring chronic health issues. This involves building collaborative and co-operative processes to improve continuity of care for the individual and ensuring that individuals have access to the right health professionals. With comprehensive information provided through electronic health records, health providers continuously monitor people's health, track their progress if they have certain illnesses, and take a broader approach to help them stay healthy. Under the PHC philosophy, the individual is part of his/her team as they are involved in decisions made about their care.*
>
> **Timely Information** *and the means for effectively communicating information are essential to ensuring that decisions are based upon the best evidence available. To effectively care for the individual, information must be comprehensive and reflect the advice and direction provided by all members of the team involved with the person. Electronic technologies are increasingly being used to ensure efficient transfer of information and to revolutionize how information is stored and utilized.*

37. Health Canada Primary Health Care Transition Fund, National Primary Health Care Awareness Strategy Fact Sheet (2009) http://www.apps.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/pchtf.nsf/WebFactSheet_E/0034?OpenDocument

> **Healthy living** *takes into account the positive choices made by individuals regarding their personal physical, mental and spiritual health. These choices include eating nutritious foods, building a circle of social contacts to create a supportive environment, being physically active, choosing not to smoke, and putting an end to other negative lifestyle practices. The focus of healthy living is the prevention of illness, disease and injury. Closely associated with healthy living is the concept of primary prevention which refers to specific activities or measures, either by the individual or at the population level, that are directed at reducing the risk or consequences of exposure to a risk factor, disease or health related event. Examples of primary prevention include immunization programs and provision of safe drinking water in the community. The healthy living pillar is also concerned with enabling individuals living with chronic disease to self-manage and make decisions to improve their overall health and quality of life.*

After the awareness campaign, there was a significant improvement in the public's understanding of primary health care across Canada.[38] PHCAC decided to leverage this work and to use these pillars to organize provincial discussions on primary health care reform.

Section 3, is a detailed overview of each pillar from considering both 'Where we are' and 'Where we want to go' in New Brunswick. Section 4 summarizes the discussion of 'How we are going to get there' or Recommendations.

38. Health Canada Primary Health Care Transition Fund, National Primary Health Care Awareness Strategy Fact Sheet (2009) http://www.apps.hc-sc.gc.ca/hcs-sss/prim/phctf-fassp/pchtf.nsf/WebFactSheet_E/0034?OpenDocument

# SECTION 3
# ADVICE AND DIRECTION

## Pillar 1 - Access: Where are we now?

The mainstay of primary care is the family physician's office, however a wide range of alternative access points are available including emergency services located in hospitals, walk-in clinics, telephone advice services (e.g. Tele-care, in-hospital advice services), community health centres, health centre, public health offices, pharmacy services etc. In April 2008, the College of Family Physicians of Canada (CFPC) and the Canadian Medical Association published a discussion paper on primary care wait times.[39] 'Access to care' was recognized as a key issue facing the Canadian health care system. The three primary foci of concern for patients were:

1. finding a family doctor
2. getting an appointment with a family doctor
3. being referred, when needed by the family doctor for more highly specialized investigations or consultations. [40]

Despite the growing acknowledgement that primary health care is the foundation of the health care system, there is minimal knowledge about how patients, as a population, interact with the primary health care system. The CCHS does include questions which help to monitor overall patient concerns about primary health care but there is limited surveillance or reporting on the system utilization. This is largely due to the challenge of finding and synthesizing the necessary data. There is no comprehensive primary health care information system currently collecting and analyzing this information. The limited information that is available is typically pulled as secondary data from family physician billing systems (Medicare), the Hospital Information System (HIS) and other administrative data bases. As a result it is very difficult to have meaningful dialogue on wait times for primary care, to develop strategies to address areas of weakness and to determine if these strategies are making a difference.

39. College of Family Physicians of Canada & Canadian Medical Association. (April 2008) And still waiting, exploring primary care wait times in Canada. Executive summary p. V.
40. Ibid.

A preliminary analysis, based on 2007 data, using the above data bases, was completed profiling the core service provided through family physicians to begin to better understand issues related to primary health care in New Brunswick. In 2007 New Brunswick was organized into eight zones. Zone 1B and Zone 1SE were two distinct health zones that share a geographic footprint while the population can selectively choose which health authority they wish to access services in. However in order to analyze access patterns within catchment area, this was considered as one zone.

There are two significant challenges with the data availability and comprehensiveness; time of data collection and incomplete data re salaried family physicians. Data was accessed from the Medicare billing database and from the HIS. There is some discrepancy in the data collection period between the HIS and that from Medicare. While both reflect 12 months of activity, HIS is a fiscal year and Medicare is a calendar year. However for the purposes of this review, the possible analysis issues related to discrepancy in the data collection time frame are offset by the improved quality of the post audit data. The second consideration is the lack of information from salaried family physicians. Medicare has recently mandated that all salaried family physicians submit shadow billing. However, in 2007, all salaried family physicians were not submitting shadow billing data, so much of the activity of salaried family physicians was not measured. This is very significant, with the most serious impact of underestimating the contribution of salaried family physicians to the health care system. However the goal of this exercise was to identify areas requiring further investigation and this is still reasonable even with the data limitations identified.

The primary question of interest is how the New Brunswick population accessed primary health care services offered by family physicians. The goal is to provide a high level understanding about where New Brunswickers accessed family physician services in 2007 and to identify patterns of utilization either by age groups or geographic regions that would direct and inform further study.

## The Statistics – Family physicians, After Hour clinics and Emergency Rooms

The following figure profiles the number of family physicians by zone and the practice area. This figure only included family physicians who had at least $60,000 in earnings for the fiscal year. The analysis then determined which practice setting (office, After Hour clinics, emergency room or hospital) was the 'source' of the majority of earnings. The family physician may also work in other practice settings, but that setting was not the source of the 'majority' of earnings. As example, there were 186 MDs in Zone 1. Of these 87 earned at least $60,000 as their main source of income, in office settings through fee for service. There were 50 MDs who had office

practices that were salaried. There were six who earned at least $60,000 as their main source of income, in After Hour clinics and 35 who earned the majority of their income in emergency rooms and eight in hospitals. It is possible that a physician could have an office practice but still earn the majority of income in the emergency room.

**Figure 7: Number of general practitioners by zone and practice area**

| Zone | Total MDs | Office practice Fee For Service | Office practice Salaried MD's | Afterhours (AH) Clinics | Emergency Room (ER) | Hospital |
|---|---|---|---|---|---|---|
| 1 | 186 | 87 | 50 | 6 | 35 | 8 |
| 2 | 147 | 94 | 13 | 1 | 29 | 10 |
| 3 | 145 | 92 | 22 | 1 | 22 | 8 |
| 4 | 49 | 29 | 1 | 0 | 12 | 7 |
| 5 | 29 | 12 | 5 | 0 | 7 | 5 |
| 6 | 73 | 44 | 6 | 1 | 18 | 4 |
| 7 | 35 | 22 | 4 | 0 | 8 | 1 |
| **Total** | 664 | 380 | 101 | 9 | 131 | 43 |

Source: New Brunswick Medicare Services (2007)

It should be noted the count of family physicians does not necessarily correlate with their status of full time work equivalent. This number only reflects the number of family physicians with a minimum of $60,000 in earnings in 2007.

In 2005, Dr B. Starfield, an internationally acclaimed researcher in primary health care delivery[41], examined what impact the number of family physicians had on health outcomes. There was consistent evidence that the 'supply' or access to a primary care family physician was positively associated with better population health. The total number of family physicians who earned the majority of their income in an office and After Hour practice were considered in context of the New Brunswick population. Based on a population of 481 family physicians and 749,782 population estimate, there were on average nine family physicians per 10,000 population. This is an average of 1,559 patients per family physician.

Figure 8 examines the relative coverage of the catchment population compared to the number of family physicians who maintained an office practice, either on a salaried or fee for service remuneration model.

41. http://www.ncbi.nlm.nih.gov/pubmed?term=Starfield+Barbara[au]

## Figure 8: Profile of family practice physicians in office practices per catchment capita

| Zone | Catchment Population[42] | Office practice FFS | Office salaried MD's | # of people per FFS + Salaried |
|---|---|---|---|---|
| 1 | 197,703 | 87 | 50 | 1443 |
| 2 | 174,952 | 94 | 13 | 1635 |
| 3 | 172,180 | 92 | 22 | 1510 |
| 4 | 50,693 | 29 | 1 | 1690 |
| 5 | 28,281 | 12 | 5 | 1664 |
| 6 | 79,891 | 44 | 6 | 1598 |
| 7 | 46,082 | 22 | 4 | 1772 |
| **Total** | 749,782 | 380 | 101 | 1559 |

Source: New Brunswick Medicare Services (2007)

The number of family physicians who had office practices were compared to the catchment population. As an example, in Zone 1, 197,703 people could access 137 family physician offices or an average of 1,443 persons in each practice. The per capita profile suggested some zone variation in availability of family physicians for the catchment population, with Zone 7 having the highest average of patients per family physician and Zone 1, having the lowest average of patients per family physician. There is no official provincial benchmark for optimal practice size in the province. Ongoing surveillance from Medicare supports that about 70 per cent of New Brunswickers visit a physician in any single calendar year, and within three years almost all New Brunswickers would have at least one visit with a physician.[43] The current community health centre remuneration framework and minimum guaranteed income contracts, estimate 1,500 patients per family physician annual caseload. Using an estimate of 1,500 persons per family physician practice, Zones 2, 4, 5, 6, 7 were slightly higher than the recommended distribution. However it is important to acknowledge that this figure does not consider the family physician's practice patterns or even what is the bulk of the family physician's activity, but simply considers location. For example a family physician may offer significant support to nurse practitioners and other allied care providers, enabling care of many more patients than could be seen in a solo practice. Some locations have considerably higher remuneration per service codes. As a result, a physician may earn the majority of income in one location, but actually provide considerable work in another location. For example, physicians coded under emergency rooms, may also have ongoing

42. Source: Statistics Canada. Table 109-5315 - Estimates of population (Cencus and administrative data), by age group and sex, Canada, provinces, territories, health regions and peer groups, annual (number) (table), CANSIM (database), http://cansim2.statcan.gc.ca/cgi-win/cnsmcgi.exe?Lang=E&CNSM-Fi=CII/CII_1-eng.htm (accessed: March 23, 2009)

43. Personal communication James Ayles, February 2010 Medicare

office practices. As well, family physicians earning less than $60,000 in one location, are not profiled. As an increasing number of family physicians 'partially' retire, this may become much more common and in fact provide significant coverage, although distributed across more practices. These weaknesses in data collection and analysis highlight the need for better data sources and ongoing surveillance.

It is reasonable to expect that the 'age' and 'gender' of a population would significantly impact the demand for primary care services, so while the average rate may appear adequate, populations with more health disparities would require more access.

The following figures explore the access by patients. In order to better understand patient activity, services covered through insured billing codes were considered as a proxy of activity. A service represents a billable code for care given. A patient may make one visit and the family physician can bill one or more codes, or conversely the patient can make a visit that is not insurable and the family physician is unable to bill for that care given. Generally one service is linked to one visit. As an example in April 2009 there 180,772 GP office visits, and 196,922 service provided or 1.09 services/office visit. However, it is important to acknowledge that this analysis does not do justice to the complexity of work and services provided in many patient visits, because it only reflects the services that physicians were able to bill for during a single visit. Figures 9-12 analyzed the number of uniquely identified persons in a calendar year, age distribution of patient population, services offered, population estimate, and location of service.

Ideally it would be expected that patients access primary care through their family physician's office. After Hour clinics and emergency rooms would be alternative choices for patients, particularly when offices were closed. After Hour clinics were introduced by physicians to provide services to patients outside of typical office hours and to lessen the demand on emergency rooms. These were proposed as an alternative access for patients for evening and weekend care when family physician offices were closed. Orphan patients, or those who do not have a family doctor, also need to use emergency rooms and After Hour clinics to access a family physician. At times, patients may choose to use these alternative settings because they are unable to arrange the time off, travel arrangements etc during typical office hours.

Figure 9 links the population estimate for the area, with the total number of patients and total number of services in the family office and After Hour setting.

## Figure 9: Profile of utilization of family physician service and location by service population

| Zone | Catchment Population | *Total services in office* | Office Location (count of persons | % of pop access office | *Services per Patient* | *Total services in AH* | Afterhour Location (count of persons) | *% of pop access AH* | *Services per Patient In AH* |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 197703 | 660488 | 137999 | 70% | 4.8 | 110178 | 52421 | 27% | 2.1 |
| 2 | 174955 | 700065 | 126559 | 72% | 5.5 | 28498 | 18955 | 11% | 1.5 |
| 3 | 172180 | 595813 | 115292 | 67% | 5.2 | 32193 | 20596 | 12% | 1.6 |
| 4 | 50693 | 144933 | 33807 | 67% | 4.3 | 9526 | 6198 | 12% | 1.5 |
| 5 | 28281 | 101198 | 20396 | 72% | 5.0 | 761 | 473 | 2% | 1.6 |
| 6 | 79891 | 270872 | 59236 | 74% | 4.6 | 18536 | 10227 | 13% | 1.8 |
| 7 | 46082 | 165443 | 33711 | 73% | 4.9 | 15210 | 8870 | 19% | 1.7 |
| NB | 749,782 | 2638812 | 527000 | 70% | 5.0 | 214902 | 117740 | 16% | 1.8 |

Source: New Brunswick Medicare Services (2007)

The **population** is for the catchment. For example, in Zone 1, 660,488 office based services were consumed by 137,999 patients, or 70 per cent of the population. This averaged 4.7 services per person. As well, the After Hour clinics provided 110,178 services consumed by 52,421 patients or 27 per cent of the population accessed AH service. People saw a family physician in the office about twice as often compared to After Hour clinics. The population estimate is compared to the number of patients who had received services in a family practice office setting. Zone 3 and 4 appeared to have the greatest percentage of population that did not appear to access a family physician's office. Zone 6 appeared to have the highest percentage of population estimate who did have access in a family practice office setting. On average 30 per cent of the population did not access a family physician's office setting but it is not possible to determine if they in fact had no need to access medical primary health care, had no desire for a family physician or if they accessed alternate settings.

The patient group which is seen in the office setting may also be part of the patient group seen in the After Hour setting. The family physicians in office settings provide almost triple the number of services per patient, but this would be expected with family practice as there would be more repeat visits in a year as well as a focus on comprehensive care. After Hour practice settings focus on episodic management of acute problems with a lower likelihood for follow up or ongoing monitoring.

In Figure 10, rates were calculated to enable comparisons across NB zones.

**Figure 10: Comparative rate of patients who accessed care in office or After Hour practice locations**

| Zone | Catchment Population | Office Location (count of persons) | CHC Location (count of persons) | Utilization rate (person / population) | Afterhour Location (count of persons) | Utilization rate (person / population) |
|---|---|---|---|---|---|---|
| 1 | 197,703 | 137999 | 1568 | 0.71 | 52421 | 0.27 |
| 2 | 174,952 | 126559 | 6685 | 0.76 | 18955 | 0.11 |
| 3 | 172,180 | 115292 | 10240 | 0.73 | 20596 | 0.12 |
| 4 | 50,693 | 33807 | 0 | 0.67 | 6198 | 0.12 |
| 5 | 28,281 | 20396 | 9330 | 1.05 | 473 | 0.02 |
| 6 | 79,891 | 59236 | 21998 | 1.02 | 10227 | 0.13 |
| 7 | 46,082 | 33711 | 0 | 0.73 | 8870 | 0.19 |
| Total | 749,782 | 527000 | 49821 | 0.77 | 117740 | 0.16 |

Source: New Brunswick Medicare Services (2007)

Zone 1 had a population estimate of 197,703, 137,999 patients visited family physician offices and 1,568 visited a CHC, or 0.71 per cent accessed of the population accessed care from a private family physician or a CHC location. As well, 52,421 patients received care in an After Hour clinic, or about 0.27 per cent of the population. There is significant variation in the relative rate of access among the zones. This difference may be artifact due to the lack of data from salaried family physicians. Where possible, proxy data bases were used to estimate the activity of salaried family physicians, as in the case with CHCs. The CHCs were not submitting shadow billing data, but there was information related to the total number of patients in the CHC as well as the number of visits to family physicians. This would slightly inflate the number of patients, as not all patients of the CHC are also patients of the family physician(s). This would be particularly true in CHCs with 'stand alone' walk-in clinics such as in Zone 3 (Minto), Zone 5 (Dalhousie), and Zone 6 (Lameque, Caraquet). These walk-in clinics are structured similarly to After Hour clinics and are widely accessed by the community at large.

One would still expect that there is significant undercounting of patients in office practices, as Zone 1 had the highest proportion of family physicians to patient population ratios, as profiled in Figure 2. In Zone 1, one third (1/3) of the office-based family physicians were paid by salary. Shadow billing data is now being collected and this will provide further clarification and understanding. However that does not explain the higher utilization of After Hour clinics by populations in Zone 1 and 7. The relatively high utilization rate of office practice in Zone 5 and 6, suggests that the population has both higher care needs as well as relatively little difficulty in accessing a family physician. As an individual's age is a strong predictor of health services, it is relevant to consider age profiles in service utilization.

Figure 11 provides preliminary data on how the age of the patient may impact service utilization.

The % of zone population estimate age group" the percentage of the catchment population in that age group. For example, in Zone 1, 58 per cent of children between 0-19 visited an office practice. Within the practice itself, children made up only about 17 per cent of the total number of patients seen. In this age group, children were responsible for only 14 per cent of the activity offered by the practice.

**Figure 11: Access to primary care by age groups in office practices**

| Zone | | % of region population estimate age group | % of office practice population | % of office practice activity | Services / patient |
|---|---|---|---|---|---|
| 1 | 0-19 | 58% | 17% | 14% | 4 |
| | 20-44 | 59% | 30% | 28% | 4 |
| | 45-64 | 80% | 33% | 33% | 5 |
| | 65+ | 94% | 20% | 25% | 6 |
| 2 | 0-19 | 62% | 20% | 17% | 5 |
| | 20-44 | 63% | 30% | 25% | 5 |
| | 45-64 | 82% | 32% | 32% | 6 |
| | 65+ | 92% | 18% | 26% | 8 |
| 3 | 0-19 | 58% | 20% | 16% | 4 |
| | 20-44 | 55% | 29% | 27% | 5 |
| | 45-64 | 77% | 32% | 32% | 5 |
| | 65+ | 94% | 19% | 25% | 7 |
| 4 | 0-19 | 47% | 15% | 10% | 3 |
| | 20-44 | 59% | 28% | 23% | 3 |
| | 45-64 | 77% | 37% | 37% | 4 |
| | 65+ | 88% | 20% | 30% | 6 |
| 5 | 0-19 | 49% | 14% | 10% | 3 |
| | 20-44 | 61% | 25% | 21% | 4 |
| | 45-64 | 84% | 38% | 40% | 5 |
| | 65+ | 97% | 23% | 30% | 7 |
| 6 | 0-19 | 61% | 16% | 10% | 3 |
| | 20-44 | 65% | 27% | 23% | 4 |
| | 45-64 | 81% | 37% | 38% | 5 |
| | 65+ | 93% | 20% | 29% | 7 |
| 7 | 0-19 | 60% | 18% | 12% | 3 |
| | 20-44 | 63% | 27% | 24% | 4 |
| | 45-64 | 81% | 34% | 35% | 5 |
| | 65+ | 95% | 21% | 29% | 7 |

Source: New Brunswick Medicare Services (2007)

There is widespread discussion in lay and professional journals about the complex health challenges of the aging population. Figure 11 explored the difference in access by age groups of the office practice setting and by zone. The analysis considered by zone, what was the percentage of people within select age groupings that had accessed primary care through a family physician's office; what percentage was this based on the total of people who had accessed care; and what percentage was this of the family physicians' total services that had been rendered.

The senior population appeared to have very open access to a family physician as demonstrated by the number of patients who were seen in office practices, compared to the population estimate. The lowest percentage was in Zone 4, where 88 per cent of seniors had seen a family doctor, and the highest percentage was in Zone 5 with 97 per cent of seniors having been to the family physicians' office. They tend to comprise about 20 per cent of the family physician practice although they are responsible for 25-30 per cent of the practice activity. Seniors have the highest proportion of services per patients. The 45-64 age group makes up slightly over 1/3 of the practice population and are responsible for about 1/3 of the practice activity. This raises concern as this population ages, given that the care needs are likely to rise and consume proportionately more of the available practice resources. As somewhat expected, there is less access by youth and young adults of primary care services, and correspondingly they make up less of practice population and consume on average fewer services.

Figure 12 provides a similar profile of the After Hour Clinic setting. Similar to Figure 11 the analysis considered by zone, what was the percentage of people within select age groupings that had accessed primary care through an After Hour clinic; what percentage was this based on the total of people who had accessed care; and what percentage was this of the total services that had been rendered.

The "% of population estimate" column represents the percentage of the catchment population in that age group. For example, in Zone 1, 28 per cent of children between 0-19 visited an After Hour clinic. Within the clinic itself, children made up only about 28 per cent of the total number of patients seen. In this age group, children were responsible for 32 per cent of the activity offered by the clinic.

## Figure 12: Access to primary care by age groups in After Hour clinics

| Zone | Age Group | % of population estimate | % of AH practice population | % of AH practice activity | services / patient |
|---|---|---|---|---|---|
| 1 | 0-19 | 35% | 28% | 32% | 2 |
| | 20-44 | 30% | 40% | 40% | 2 |
| | 45-64 | 21% | 23% | 21% | 2 |
| | 65+ | 16% | 9% | 7% | 2 |
| 2 | 0-19 | 16% | 35% | 38% | 2 |
| | 20-44 | 12% | 38% | 37% | 1 |
| | 45-64 | 8% | 21% | 19% | 1 |
| | 65+ | 5% | 6% | 6% | 1 |
| 3 | 0-19 | 15% | 29% | 29% | 2 |
| | 20-44 | 13% | 39% | 40% | 2 |
| | 45-64 | 10% | 23% | 23% | 2 |
| | 65+ | 8% | 8% | 8% | 1 |
| 4 | 0-19 | 15% | 26% | 27% | 2 |
| | 20-44 | 14% | 36% | 37% | 2 |
| | 45-64 | 11% | 28% | 27% | 1 |
| | 65+ | 8% | 11% | 10% | 1 |
| 5 | 0-19 | 1% | 19% | 17% | 1 |
| | 20-44 | 4% | 65% | 70% | 2 |
| | 45-64 | 0% | 10% | 8% | 1 |
| | 65+ | 1% | 7% | 5% | 1 |
| 6 | 0-19 | 15% | 23% | 21% | 2 |
| | 20-44 | 14% | 35% | 34% | 2 |
| | 45-64 | 11% | 30% | 31% | 2 |
| | 65+ | 10% | 12% | 14% | 2 |
| 7 | 0-19 | 24% | 27% | 26% | 2 |
| | 20-44 | 20% | 33% | 33% | 2 |
| | 45-64 | 18% | 28% | 29% | 2 |
| | 65+ | 14% | 12% | 12% | 2 |

Source: New Brunswick Medicare Services (2007)

In all zones, in all age groups, a significantly lower percentage of the population estimate, accessed After Hour clinics. After Hour clinics appeared to be more commonly used by the younger population. The highest percentage of users compared to the population estimate was youth; and the lowest seniors. This was exactly the reverse of office practice settings. However within the actual clinic settings, the majority of patients were young adults. This would seem reasonable if the services were being consumed by individuals who were unable to access timely appointments their family physician during standard office hours. For example, working young adults may have more difficulty to get time off to see the doctor either for their own health needs, or for the needs of their children. As a result they would access these clinics. All age groups appeared to have a similar rate of access, about two visits per year among users. This is approximately half the average number of services per patient in office settings, consistent with the management of more acute, episodic health concerns. Seniors consume the least services in these clinics, suggesting that they are able to access their family physician office. They may also have a lesser incidence of acute episodic health issues that can be cared for in such clinics. It would be interesting to examine how emergency rooms are used by age brackets.

There is ongoing concern about the growing number of patients without family doctors. Data from CIHI[44] suggested that about 12 per cent of adult New Bruswickers do not have a usual place that they go to when they are sick or need advice about their health. In March 2009, brief survey was completed on the estimated number of orphan patients in the zones. There was no consistent method of monitoring orphan patients among the zones.

After Hour Clinics may provide an alternate way to estimate the number of orphan patients. By comparing the total number of uniquely identified patients who accessed care at either office locations and/or After Hour clinics with the number of patients uniquely registered in office locations, it is possible to calculate the number of uniquely identified patients who only accessed care in After Hour Clinics. It would seem reasonable that this would be an alternative access to primary health care if one did not have a family doctor. Ideally this would also be cross referenced with HIS data, which captures family physician in the registration data, but this level of detail was not available. Figure 13 profiles the estimated patients who only accessed care in After Hour locations. This is lower than the 12 per cent that was estimated by CIHI, but would not take into account persons without a family physician, who did not require health care services. Again the lack of information from salaried family physician practices considerably weakens this analysis.

44. CIHI (July, 2009) - Experiences with Primary Health Care in Canada http://secure.cihi.ca/cihiweb/products/cse_phc_aib_en.pdf

In Figure 13, the population estimate column represents the number of persons of the catchment population in that age group. For example, in Zone 1 there are 41,386 children aged 0-19. Of these 28,956 visited either an After Hour clinic or a family physician office. We were able to determine that 5,078 only visited an After Hour clinic by cross referencing between the two practice areas. This is 12.27 per cent of the children in that zone. Overall 6.95 per cent of that catchment community (all ages combined) used an After Hour service.

**Figure 13: Estimate of orphan patient population**

| Zone | Age Group | Population estimate | Total pts in office + AH practices | Pts who do not go to office | % of populati on estimate age group in the region | % of region's population estimate |
|---|---|---|---|---|---|---|
| 1 | 0-19 | 41386 | 28956 | 5078 | 12.27% | 6.95% |
| | 20-44 | 70473 | 47892 | 6316 | 8.96% | |
| | 45-64 | 57248 | 47587 | 2053 | 3.59% | |
| | 65+ | 28596 | 27306 | 295 | 1.03% | |
| 2 | 0-19 | 41124 | 27400 | 1726 | 4.20% | 2.37% |
| | 20-44 | 59355 | 39333 | 1673 | 2.82% | |
| | 45-64 | 49652 | 41092 | 612 | 1.23% | |
| | 65+ | 24824 | 22885 | 140 | 0.56% | |
| 3 | 0-19 | 39810 | 24986 | 1837 | 4.61% | 3.09% |
| | 20-44 | 61995 | 36488 | 2550 | 4.11% | |
| | 45-64 | 47504 | 37523 | 815 | 1.72% | |
| | 65+ | 22871 | 21622 | 125 | 0.55% | |
| 4 | 0-19 | 10609 | 5640 | 634 | 5.98% | 3.20% |
| | 20-44 | 15990 | 10075 | 680 | 4.25% | |
| | 45-64 | 16383 | 12868 | 259 | 1.58% | |
| | 65+ | 7711 | 6844 | 47 | 0.61% | |
| 5 | 0-19 | 5881 | 2920 | 39 | 0.66% | .73% |
| | 20-44 | 8417 | 5308 | 152 | 1.81% | |
| | 45-64 | 9225 | 7766 | 11 | 0.12% | |
| | 65+ | 4758 | 4608 | 4 | 0.08% | |
| 6 | 0-19 | 15333 | 10193 | 768 | 5.01% | 3.30% |
| | 20-44 | 25019 | 17273 | 1121 | 4.48% | |
| | 45-64 | 27048 | 22629 | 592 | 2.19% | |
| | 65+ | 12491 | 11774 | 152 | 1.22% | |
| 7 | 0-19 | 9982 | 6816 | 778 | 7.79% | 4.72% |
| | 20-44 | 14636 | 10126 | 894 | 6.11% | |
| | 45-64 | 14110 | 11861 | 423 | 3.00% | |
| | 65+ | 7354 | 7085 | 82 | 1.12% | |
| *Total* | | 749785 | 556856 | 29856 | 3.98% | |

Source: New Brunswick Medicare Services (2007)

There was significant variation among the zones, with Zone 1 profiling the highest potentially 'orphaned' population at 6.95 per cent. Zone 5's data was valuable in recognizing that patients did not access After Hour clinics, but this was probably because there was very limited access to these services. The analysis by age group offered valuable information about the health care needs of the orphaned population. Zone 1 continued to profile a high number of children and young adults who did not appear to have a family doctor. This suggested that young families may have had the most difficulty in accessing a family physician, either due to office practice hours, or no family physician. Seniors again were the lowest user group, followed by the 45-64 year old cohort.

Emergency rooms are an alternative access site for primary health care needs both by patients with family doctors as well as those who are orphaned. Figure 14 provided some insight on the Emergency Room utilization. Here the population estimate in each zone was compared to the number of emergency room visits. Note that one person can make multiple visits.

**Figure 14: Rate of ER visits by zone**

| Zone | Catchment Population | Emergency room visits (count of visits) | Utilization rate - number of visits / 1000 population) |
|---|---|---|---|
| 1 | 197,703 | 151471 | 766 |
| 2 | 174,952 | 143962 | 823 |
| 3 | 172,180 | 140632 | 817 |
| 4 | 50,693 | 73258 | 1445 |
| 5 | 28,281 | 27324 | 966 |
| 6 | 79,891 | 65839 | 824 |
| 7 | 46,082 | 42090 | 913 |
| **Total** | 749,782 | 644576 | 766 |

Source: New Brunswick MIS annual report 2007-2008

Data was only available based on visits, not persons. Visit activity from the HIS provided preliminary insight of how patients accessed Emergency Rooms. The relatively low access rate to After Hour clinics and Family physician offices profiled in Figure 10 for Zone 4 may be partially accounted for in Figure 14, where Zone 4 has the highest access rate in ER visits. This data likely includes multiple visits by the same person. Interestingly, the lowest rate of utilization of the ER is in Zone 1. This may reflect the higher rate seen in After Hour clinics, which were actually first introduced in Zone 1, by the ER Doctors. Zones 4, 5, 6 all had a higher percentage of the family doctors who worked primarily in ER settings (Figure 1) compared to the other zones and this may also partially explain the higher utilization.

It appears that both emergency rooms and After Hour clinics have a critical role in covering primary care needs for office practices and perhaps orphan patients. It is important to have a better understanding of these as well as data on salaried family physicians in order to correctly plan for population health service.

## The Profile of CHCs, Health Service Centres, Tele-care

CHCs, with care provided by an interdisciplinary team of health care providers, are widely endorsed as a service model that has the potential to improve access and manage wait times. In 2007 there were approximately 22 family physicians working in seven community health centres. One community health centre has a hybrid model, with a fee for service family physician working onsite. In the other six sites, the family physicians were salaried. The CHC family physicians have not been submitting shadow billing data, which prevents a comparative profile from the Medicare database. The data is not available on the number of patients who only saw the family physician, but we do know the number of patients who accessed care in the CHC. In Zone 1, 1568 clients went to the CHC. There were 2411 visits to a family physician in the office, and 337 visits as a walk in. Of the 1568 persons, we do not know the relative breakdown of visits among the team members. Within the unscheduled visits, we do not know how many considered the physician their family physician.

**Figure 15: Patient and visit profile in CHCs**

| Zone | Clients served | Scheduled visits | Unscheduled visits |
|---|---|---|---|
| 1 | 1568 | 2411 | 337 |
| 2 | 6685 | 19848 | 0 |
| 3 | 10240 | 16697 | 8587 |
| 5 | 9330 | 3537 | 16259 |
| 6 | 7025 | 3687 | 14054 |

Source: New Brunswick MIS Annual Report 2007-08

The CHCs have an electronic medical record but there is only limited data that is aggregated centrally. Data from Central Miramichi CHC and Caraquet was not included in the Figure 15 because those family physicians were paid on a fee for service basis, and would be counted with other fee for service family physicians in office practice locations. The Gibson Collaborative Clinic activity was included within the Zone 3, CHC activity. The patients served is not necessarily limited to patients who accessed family physicians but includes all patients who received care in the CHC. However it is reasonable to expect that the significant majority are patients of the family physician(s). Scheduled and unscheduled visits would be roughly analogous to services. Unscheduled visits are those made to the walk in clinic.

Data related to health service centres and collaborative practices was merged into the discussion of family practice, After Hour and emergency rooms. While it would be valuable to know more about those practices, perhaps the most significant take-away is that these already exist and it would make sense to leverage them.

## Tele-care

New Brunswick had recognized the need to enhance primary health care access in the mid 1990s. Tele-care and Health Related Information Lines have been available in both official languages, toll-free, province wide, 24 hours/day, seven days a week, since February 1997. The service is currently run by the Department of Health with support of a third party service provider, Sykes. Sykes employs nurses who are experienced in acute emergency or ambulatory care settings. The nurses use standardized clinical guidelines, accessible through computer software, to rapidly identify callers' needs, triage symptoms and provide health information/advice and referral if necessary.

For the fiscal year 2007-08, Tele-care took calls from 64,000 NBers and provided care advice for over 87,000 health issues. Figure 16 profiles serviced calls by outcome.

**Figure 16: Tele-care calls by service outcome**

| | |
|---|---|
| 911/ambulance dispatch | 5.1% |
| Community Service | 0.5% |
| ED Guideline-directed | 17.0% |
| ED no guideline | 2.8% |
| Other | 0.3% |
| Other Health care provider | 1.2% |
| Pharmacy | 0.5% |
| Family physician referral | 37.8% |
| Self care | 32.7% |
| None specified | 1.7% |

Source: New Brunswick Telecare Service 2007

This translates to one in five New Brunswick households using the service. The largest users were women of child bearing age, with 22 per cent of calls for children under five years of age and 8 per cent regarding babies under the age of one. The province is currently exploring the use of Tele-care as a single entry point for the province for patients who are looking for family doctors.

## Nurse Practitioner and Primary Health Care

In early 2000, the Province of New Brunswick in partnership with key stakeholders including the Nurses Association of New Brunswick (NANB), the New Brunswick Medical Society (NBMS) and the University of New Brunswick worked together to introduce nurse practitioners (NP). NPs had been recognized in other jurisdictions as key enablers in primary health care renewal. With a broader scope of practice that included not only the ability to assess, treat and diagnose illnesses, but also skills in health promotion, population health and community development, they were well prepared to be key players enabling primary health care renewal in New Brunswick. The first NPs were hired in 2004 and by 2007, there were 39 NPs working in NB in a variety of settings. Figure 17 profiles the workplace settings and locations by zone in 2007-08.

**Figure 17: Nurse practitioner work settings in 2007-08**

| | | |
|---|---|---|
| 5 Community Health Centres | Zones | 1,2,3,5,6 |
| 12 hospital settings | Zones | 1,2,3,4,5,6,7 |
| 4 Health Service Centres | Zones | 2,6 |
| 2 Psychiatric facilities | Zones | 2 |
| 1 Community Mental Health Centres | Zone | 7 |
| 1 Public Health Offices | Zone | 1 |
| 1 Extramural Offices | Zone | 1 |
| 1 Collaborative Practice | Zone | 6 |

Source: NB Dept of Health, HRDB Database

Within the CHC framework, the NPs have become integral team members. In 2007-08 the Hospital Utilization and Financial Information database (MIS) recorded that NPs in CHCs had 11,565 visits with patients.

## Summary of "Where are we now"

"Access: Where are we now" recognized the family physician as the mainstay in primary health care delivery. In 2007, young families appeared to have the most difficulty with accessing primary health care. After Hour clinics appeared to fill an important need for primarily young families in providing evening and weekend access to primary care. Seniors appeared to have a family physician which may be related to concomitant chronic diseases requiring more frequent management. It would be valuable to better understand the importance of emergency rooms in meeting primary health care needs. As well it would be valuable to have a clinical, economic and utilization data source that could be used to cross compare various primary health care service sites such as CHCs, HSCs, emergency rooms, office and After Hour practice settings. The province was an early adopter of technology and has integrated a Tele-care system that appeared to be an important resource point for mothers of young children.

In 2007, an estimated 80 per cent of the NB population accessed the family physician through private offices, After Hour clinics or CHCs. The comparative analysis of utilization between family practice office locations and After Hour locations highlighted significant differences in access patterns by zone and by age groupings. On average there was one family physician to 1,559 persons. However, this did not consider how much the physician worked, or where they worked. The analysis then focused on developing a better understanding of how patients accessed office

practice locations and After Hour locations. Generally about 70 per cent of the population saw a physician in an office practice setting. Middle- aged and older adults were the highest user groups in office settings, consuming about 60 per cent of the practice activity. Seniors had the highest number of visits per persons. After Hour clinics were used by about 16 per cent of the population. Generally youth and young adults were the high user groups and consumed the greatest percentage of the practice activity. On average patients made almost twice as many visits to a family doctor in an office setting compared to an After Hour practice. There was considerable difference among the zones in terms of access to After Hour clinics. Zone 1 and Zone 7 had significantly higher utilization rates, with again young adults being key users. A cross analysis between After Hour clinics and office practice locations was performed, to identify patients who only accessed After Hour clinics. There appears to be a cohort of users without documented evidence of a family physician. It is assumed that this may represent patients without family doctors or orphaned patients. Again the population of After Hour users without family physicians, is over-represented by young families. The mix of family physicians and the primary location of practice may be strong determinants in access patterns. As an example, in Zone 5, 58 per cent of family physicians worked primarily through the ER. This was much higher than the rest of the province. When primary care in that zone was analyzed, only 41 per cent of the population estimate accessed care through either the office or After Hour clinic setting, compared to all other zones which ranged between 70 and 77 per cent. They also had the second highest utilization of ER visits by the zone population estimate. In a very real sense, patients went where the doctors were. The ratio of family physicians to catchment population was actually the lowest in Zone 1, although both the orphaned population and utilization of After Hour clinics is high. This needs further study.

The recent introduction of nurse practitioners has been promising. Although there were still comparatively few NPs, they have been embraced across a wider variety of work settings across the province. Within the CHCs they have significantly improved access for their patient populations.

## Access: Where do we want to go?

The philosophy of PHC shifts the emphasis of health care away from hospitals and into the community, where the family physician supports the continuum of care, linking community and hospital. Patients would benefit from improved access to screening, health promotion, and self management supports.[45] As a result most provinces are adopting incentives in fee for service billings to support improved chronic disease management. Research has identified that patients with higher care

45. http://www.ihi.org/IHI/Topics/ChronicConditions/

needs, as those with chronic diseases, were significantly better cared for and created less economic burden on the health care system when they were attached to a primary care family physician.[46]

Salary arrangements may be an important factor in determining the required mix of primary health care services. Remuneration discussions must consider the 'types' of services that are insured or 'billable'. Currently preventive services, such as periodic health exams, are not insured, although it has been well supported that earlier case finding, and health counseling led to improved health maintenance. This needs to be acknowledged and reinforced within the remuneration model so that family physicians provide an optimal mix of these services.

The family physician has traditionally been responsible for primary care. This includes assessing, diagnosing and treating patients, as well as referring patients to other levels of care and/or to other types of care services when needed. Family physicians report that for most people, health care seldom moves beyond this frontline service.[47] This process of referral, reflects the relative isolation of family physicians in office practices. While they may act as gatekeepers, enabling access to other health care providers, there is little immediate support for family physicians in managing the primary health care needs of their patients.

Some services have been established, as in the case with diabetes education clinics, but often these services are set up in large tertiary hospitals during traditional office hours. These services often have high no-show rates. Services need to be provided closer to the patient's home, and scheduled to avoid conflict with work-related commitments. For example diabetes education could be offered in the evenings and on weekends as well as through alternate learning models such as self-study modules online. As well, there is the need for co-ordinated programs directed at prevention and early detection of chronic diseases. The conceptual model of chronic diseases must broaden, and include mental illnesses as well as addictions.

Balancing work and personal needs of health care providers has been an important consideration in ensuring sustainable human resources. The archetype country doctor on call 24/7 was not sustainable. Over the years family physicians continued to trial alternative arrangements such as group practices, to ensure that patients had appropriate access to 24/7 care. Although there is some information on primary care utilization, the lack of comprehensive surveillance data that includes also wait times severely restricts the capacity to understand what the gaps and challenges are, and

46. Hollander, M., Kadlec, H., Hamdi, R., & Tessaro, A. (2009) Increasing value for money in the Canadian Healthcare system: New findings on the contribution of primary care services. Healthcare Quarterly. 12(4)
http://www.longwoods.com/product.php?productid=21050&cat=609
47. College of Family Physicians of Canada, (April 2008) p12.

to be able to develop solutions that can then be monitored to determine if the issues are resolving.

The preliminary data on primary care practices identified a number of areas that required more investigation. The committee strongly endorses more detailed ongoing surveillance of access to primary health care services using an indicator dashboard. This information has the potential to build critical benchmarks for ongoing quality improvement initiatives.

The development of rural hospitals enabled a wider health care team, through emergency rooms to assist in providing this needed care. Today it is well recognized that emergency rooms are not appropriate for primary health care services and in fact the centralization of tertiary services itself created accessibility issues for rural populations. The introduction of After Hour Clinics and services such as Tele-care provide partial solutions. New Brunswickers continue to describe difficulties in accessing care 24/7. In particular, young families appear to be higher users of both After Hour clinics and Tele-care. This may relate to difficulties with obtaining a family doctor, inability to arrange visits during routine office hours, or need for health information outside of office hours. Innovative approaches that involve teams, alternative funding mechanisms, and technology are needed to build a sustainable primary health care network that is accessible, available, appropriate and affordable for New Brunswickers.

New approaches need to be developed, as society copes with a quickly aging population and what is a fast growing health-care issue. The social structure has changed significantly, and many seniors do not have extended support networks available from their children and families. There is inadequate access to supportive living residences and built environments to enable independent senior living. The current hospital setting has become a default care service for frail seniors who are awaiting placement in longterm care facilities. Service models may involve customizing the built environment to include access to supportive living residences with in-facility health care teams. Tele-health technology may help enhance access by providing virtual home visits to seniors, countering the barriers imposed by distance or mobility limitations. While advances have been made in training home care workers, there continues to be serious gaps and opportunities to further improve access to affordable, qualified and reliable home support workers. These solutions cannot be the responsibility of the health care team, but will come from all sectors of government working together. A key partner will be the Department of Social Development.

There are numerous anecdotes describing the challenge that many families face when trying to attend health care appointments while balancing factors

of geography, income and culture. There must be co-ordinated strategies to ensure the availability of affordable and accessible public transportation. We must ensure that families are able to afford such basic necessities as appropriate housing, food and other necessities of life as well as being able to meet heath care needs such as prescriptions, health care supplies or aides to daily living. We must address the dilemma faced by the working poor, who often have either no private health insurance or are poorly covered by the health insurance plans. As in other jurisdictions, New Brunswick heath services must consider and plan for services recognizing rural/urban realities, and cultural diversity including French, English and First Nation communities.

***The Committee has identified the desired attributes of improved access in NB at the end of the next five years. These are:***

- Every New Brunswicker has access to a family physician.
- Everyone is able to see the 'right provider' in the 'right place' at the 'right time' and at the 'right price'. This is alternatively stated as 'access to health services that are available, accessible, appropriate and affordable'.
- Mental health services are recognized as a important core services of primary health care, needed to deal with the increasing awareness of the burden of care related to mental health.
- People know where and how to appropriately access the health system.
- The patient is supported throughout their health care experience and across the continuum of care ranging from primary to tertiary levels of care and from community to institutional settings.
- There are surveillance processes in place on primary health care services with regular reporting on a dashboard of indicators related to access, to support benchmarking and ongoing quality improvement.

## Pillar 2 - Teams: Where are we now?

There are numerous examples of formal and informal teams in New Brunswick. On an informal level, family physicians have developed a loose network of support in some communities with other service providers either in the hospital system or private sector. While certainly useful, this support is typically in the form of referrals with a parallel rather than integrated approach.

Formal teams, made up of health professionals from a wide range of settings, including community health centres, community mental health services, health service centres, extramural program, primary care, and public health, are delivering excellent innovative programs and services across the province. We have taken the opportunity in this section, to highlight a few examples to illustrate the team work that is already happening in New Brunswick and the importance of leveraging the talent and expertise that exists. Examples include:

- Interdisciplinary teams typically consisting of psychologists, nurses, social workers and auxiliary personnel such as human service counselors and work rehabilitation counselors work in the 14 Community Mental Health Centres (CMHC) and satellite clinics, to address the mental health needs of the populations served.
- There are 20 health service centers, where the staff initially included nurses and family physicians, and more recently many have added visiting health care providers such as dietitians and medical specialists. These centres were first introduced in 1975 in rural communities, as a strategy to attract and retain family physicians.
- In 2003, the province established community health centres, further endorsing the importance and value of a health care team. The interdisciplinary team typically includes nurses, a family physician, a dietitian, a social worker and rehabilitative therapists.
- In January 2010, there were 51 NPs employed by the Regional Health Authorities in a variety of settings including 38 collaborative Nurse Practitioner/Physician collaborative sites throughout New Brunswick.
- Since the early 1990s, public health staff have worked in teams with staff from the Department of Social Development, Department of Education and community partners to deliver programs and services to children and families.
- The hospital system has introduced formal teams, in areas such as Diabetes Education Clinics (DEC) and Rehabilitation programs. In DEC (Diabetes Education Clinic) for example, a small team usually consisting of a nurse and a dietitian counsel patients referred by physicians.

- The extramural program is comprised of an interdisciplinary team that provides home care to patients throughout New Brunswick, most commonly through direct referral by a family physician. The team includes nurses, respiratory therapists, occupational and physiotherapists, social workers and others and the program has been cited throughout Canada as an exemplary model for community-based care delivery.

Current literature cites many examples of how teamwork has improved effectiveness and efficiency in the health care system. The Group Health Centre in Sault Ste Marie continues to be a leader, demonstrating successful team approaches[48]. The Tabor project, now part of the Chinook Primary Care Network, in Alberta is a recent example of how primary care family physicians redesigned their practice introducing a team approach. Family physicians were able to provide more comprehensive care and improved 24/7 access to primary care. Outcomes included improved use of best practices for asthma management resulting in decreased hospital admissions and emergency room visits, improved monitoring and control of glycated hemoglobin, and improved screening for breast and colorectal cancer.[49]

## Teams: Where do we want to go?

New Brunswick must develop networks of primary health care teams, creating innovative service delivery models that will ensure that all New Brunswickers are able to access a family physician supported by an interdisciplinary primary health care team. Family physicians working in private practices identify how working within a team of allied health care providers would benefit the patient as well as the health care system[50]. For example, dietitians are better trained and equipped to support patients who need to adopt better eating patterns. With allied team members onsite, the patient is able to access timely support and the team members can collaborate to provide a systematic and consistent care plan. At a population level, this improved efficiency can mean that the family physician is able to share care thereby enabling more patients to be seen as well as effectively managed.

Teamwork will change the landscape of primary care and provide the basic framework to improve the quality of health care services, the access to health care services; and the overall health and well being of the population. It will change the way we do business. Person-centered collaborative care is central to the team approach. Care is co-ordinated so that the care the person receives is comprehensive and has continuity. In collaborative care a person's heath care needs are met by a team of health care workers, with the appropriate need being met by the most appropriate provider.

48. Group Health Centre, http://www.ghc.on.ca/programs/content.html?sID=30

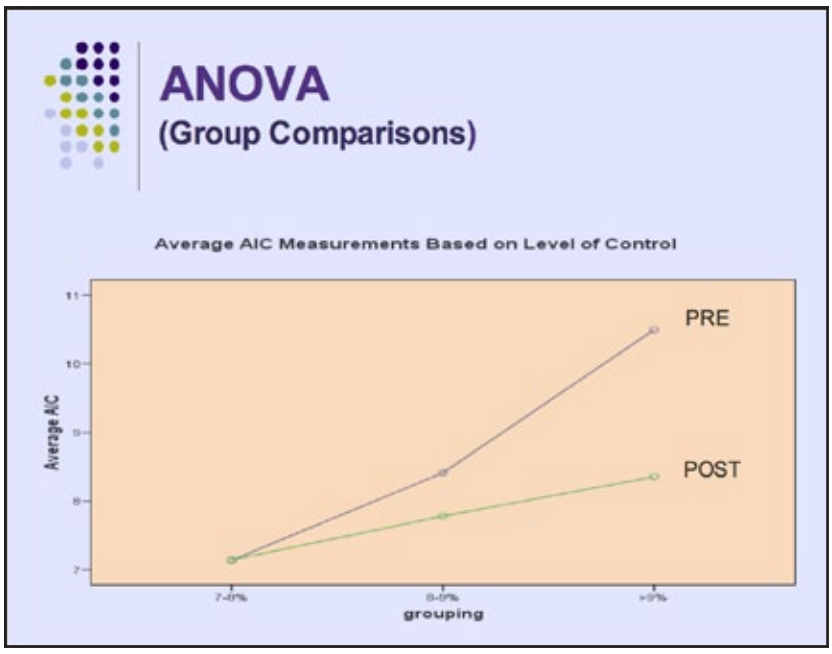
49. Dr R. Wedell, (September 2008). Personal communication

50. College of Family Physicians of Canada (2009) Patient centered primary care in Canada http://www.cfpc.ca/local/files/CME/FMF_2009/news/Bring%20it%20on%20Home%20FINAL%20ENGLISH.pdf

## Case Manager Improves Outcomes!

**Since 2005, a diabetes educator nurse has been regularly seeing patients, selected by the family physician in over 34 private family physicians offices. Typical visits include a chart review, patient assessment, patient teaching, and recommendations for the physician regarding treatment changes and referrals. In 2008, there were 1,049 patient visits.**

**The sentinel indicator used as a proxy for overall management of diabetes is Hgb A1C, with 7 per cent generally accepted as the goal for glycemic control. In a snapshot of 465 patients, there was a mean decline of .774 per cent in Hgb A1C ($p<.0001$), suggesting significant improvement in overall patient management.**




**The local endocrinologist says that she is no longer overwhelmed with referrals for patients with type 2 diabetes who need to be transitioned to insulin. The physicians are equally pleased and feel that their patients benefit from the close collaboration within the medical home!**

For more information please contact P. Ryder, Zone 1SE.

The primary health care team will focus on helping the patient to manage their health challenges and optimize wellness. The CFPC (2007), views family physicians as playing the central role in co-ordinating care for patients, maintaining continuity of care and ensuring that care is comprehensive and accessible. More effective roles for family physicians may involve transition from primary care provider to co-ordinator of the overall management of a patient's health, and steward for the well-being of

the practice population. Some of the key activities in this new role include leading and monitoring processes of care delivered by a collaborative team; supporting initiatives that address health determinants and limit risk factors; and motivating and educating patients in necessary lifestyle modifications. In other models, the care co-ordinator may be the provider with the most information about the patient or reflect the patient's preference for a care manager. What is important, is to ensure that someone is responsible for seeing that the individual receives the right care at the right time and in the right place. As one Committee member said, "Teams don't take responsibility. A person does."

The interdisciplinary teams will need a link into the community where other programs will enhance the patient's treatment plans. This would include resources such as self-help and support groups, opportunities for exercise etc. Building relationships with communities through interaction with non-government (NGOs) health–related agencies, community advisory groups, community leaders, etc., will be essential for addressing broader community needs with the social health determinants. We need to consider how to engage other stakeholders within the community, integrating their contributions to enhance primary health care services. 'Health services' are only one contributor to health and developing sustainable health care systems will require broad community based strategies to support health and wellness.

However change does not come easily. There have been many lessons learned from other demonstration projects that implemented team structures in primary health care settings. This shift will need to be supported by a robust change management strategy that builds the necessary skills to develop positive team practices. All professional services have certain criteria for determining if, when and how services are delivered. Clearly, for teams to be effective there needs to be an understanding of the modus operandi of the various members and how to support development of collaborative skills. Some providers will need to be convinced that there is added value to their practice/service over how services are presently delivered. Members will need to fully understand, trust, value and respect the competencies of the various service provider professionals with whom they work.

The teams should be organized to support professional education of new practitioners and provide preceptorship sites in primary health care delivery. This will help to ensure that students are exposed to primary health care service, providing the opportunity for development of team based skill sets and helping to attract and recruit graduates to work in these settings.

Clarity is needed as to what constitutes the team; how teams form, the relative value of onsite team versa virtual teams, governance and management of daily operations.

The advantages and disadvantages of various models may need to be determined on a case by case basis, taking into account the care setting such as the physical space, the dominant patient population and the prevalence of chronic illnesses.

Shifting to teams will take vision, committed leadership and champions. Strong administrative support and appropriate stewardship will be necessary. We will need investment of the right resources - time, money, educational opportunities and professionals – with which to support implementation and delivery, and to ensure equitable access, geographically and culturally appropriate across the Province. We recommend a staged implementation plan, developing small successful change projects that can be tested, modified and spread.

The new change in structure for New Brunswick's Regional Health Authorities provides an opportunity to move PHC to a more forward and effective position, functioning as an adjunct – not a replacement- to the traditional medical delivery of service. PHCAC endorses the role of a high-level position (e.g., Vice President Community Health/PHC) within each of the two new RHAs. This position should be mandated with the responsibility for co-ordinating activity among all of the PHC services within the RHA. This will help to ensure an integrated approach, building bridges across the continuum of health care services.

***The Committee has identified the desired attributes of primary health care teams in NB at the end of the next five years. These attributes are:***

- The philosophy of working as part of a multidisciplinary team is promoted in the training of health care professionals.
- A mechanism is in place to help allied professions integrate within a network of PHC services and is supported by the regional health authorities (RHAs).
- There are defined organizational and educational supports available to assist in the development of teams including supports directed at ongoing team management.
- There is clarity between providers of the roles, based on competencies, and a high level of trust and respect among team members.
- Clear lines of responsibility are understood and incorporated into the working of the team.
- PHC practitioner provides comprehensive services whether in hospital, on call, in the office/clinic or to individuals in their homes.
- Effective partnerships are forged between multidisciplinary teams, non-government agencies (NGOs) and communities.

## Pillar 3 – Timely Information: Where are we now?

Primary health care providers currently work with a variety of information modalities in health care delivery. Family physicians generally have a paper chart, that will include records related to clinical investigations, and past visits. Private family physician offices are able to link with the local zone hospital/health authority and access laboratory data stored in the data repository. Although all zones in New Brunswick have an electronic data base in which patient information is stored, this data does not cross zones. In Zone 6, lab data merger is time delayed even among the hospital facilities within the zone. This can result in hold ups in diagnosis/treatment, misdiagnosis/treatment or unnecessary duplication of tests and investigations. The province has committed to developing a provincial electronic repository of patient information that would be accessible regardless of where the patient presented for care. This electronic repository is under development and expected to be partly operational within the next year.

Multiple access points provide the patient with alternate entries to the health care system, however communication, or the sharing of information among service points, is a common challenge. As an example, After hour clinics, Tele-care and CHCs are described below, highlighting the difficult process of sharing information among different settings.

**After hour Clinics** – *Walk-in clinics have become a quick way to see a doctor. While walk-in clinics fill a gap, it is a challenge for the 'After Hour' family physician to appropriately manage patients with basically no history to start from. It is also a challenge for the family physician to manage a patient's health status, when uninformed about treatment received in After Hour clinics. Metaphorically, walk-in clinics have been likened to a "drive-through" with no follow-up.*

**Tele-care** – *A common concern is the lack of communication between the Tele-care service and family physician. Traditionally, the patient called his/her family physician for advice, which meant that the doctor had a record of the concern and the advice provided. Although the public is encouraged to use the Tele-care service, no process is in place that requires a record of the contact and advice given nor is that information forwarded to the family physician. Anecdotally, physicians report that patients rarely mention that they have used the Tele-care service.*

**Community Health Centres** –*The majority of CHCs have a defined 'walk in clinic'. Non-registered citizens are able to access the walk in clinic as well as other clinics that are provided by the health care team such as the dietitian, nursing etc. While there is an electronic health record that supports communication within the team, there are few communication processes to support communication with providers who are not directly connected with the CHC.*

The province is implementing a prescription monitoring program for select controlled drugs as part of a strategy to manage the growing problems of opiate addictions. There will be a monitoring and surveillance system to track the filling of narcotic prescriptions and enable feedback to family physicians.

There have been ongoing discussions with the medical society about electronic medical records (EMR). The Commonwealth Fund study conducted in 2009[51] reported that 37 per cent of Canadian primary care family physicians use some form of electronic medical record, the lowest uptake among the countries surveyed. A survey of New Brunswick MDs conducted by the New Brunswick Medical Society in 2005 found that 39 per cent of respondents use computers for scheduling; 26 per cent reported having some type of an electronic medical record. The survey was about the use of technology in general and may include family physicians who are using only the functionality for electronic billing and scheduling. It is not known how many family physicians have purchased an EMR. Only the CHCs have been provided with the Purkinje EMR and this is the only system interfaced with the hospital information system.

The Client Service Delivery System (CSDS) is an electronic health information and documentation system that is used by both Mental Health and Public Health Services. There is an addictions information system (RASS). These systems do not interface with the HIS, nor is there data abstracted for reporting either provincially or nationally to CIHI. Finally all of these systems are housed separately. There is no common central agency responsible for these information systems. The challenge of tracking patient information across electronic repositories that are neither interfaced, nor share common minimum data sets and data definitions is self evident. In fact, recognizing that patient records may exist in all these sites, with care provided through these disconnected agencies and no common portal among these agencies highlights the challenges that would exist in managing the patient care through the electronic world. This is further exacerbated by a paper world that also co-exists.

What is the cost of poor communication for patients? Dr Alvarez, President/CEO of Canada Health Infoway presented the following facts. For every 1,000:

- hospital admissions, 75 people had an adverse drug event;
- patients with an ambulatory encounter, 20 people suffered a serious drug event;
- patients discharged from hospital, 90 people suffered a serious adverse drug event;
- laboratory tests performed, up to 150 were unnecessary (range 50-150);

51. The Commonwealth Fund 2009 International Health Policy Survey of Primary Care Physicians in Eleven Countries; C. Schoen et al., "A Survey of Primary Care Physicians in Eleven Countries: Perspectives on Care, Costs, and Experiences, 2009." Health Affairs Web Exclusive, Nov. 5, 2009, w1171–w1183 http://www.commonwealthfund.org/Content/Publications/In-the-Literature/2009/Nov/A-Survey-of-Primary-Care-Physicians.aspx

- emergency department visits, 320 patients had an information gap identified; resulting in an average increase stay of 1.2 hours;
- Canadians recommended for influenza protection, 370-430 were not vaccinated.[52]

It is important to understand activity within the health care system and at a population health level. As described earlier under the heading of access, there is no comprehensive primary health care surveillance system in place. While there is a large amount of information available, the lack of a common minimum data set, data definitions, querying tools, patient confidentiality agreements etc are significant limitations. The fact that there is no single agency responsible for storing and managing this information creates further obstacles because there is no mandate or expertise developed to manage this complexity. As a result it is difficult to know what is going on in the health care system, to monitor quality improvement programming or to identify areas of excellence or those requiring improvement.

## Timely Information: Where do we want to go?

There is the obvious need for effective and efficient communication processes for all stakeholders and for record keeping processes that build cumulative health records. Reliable and valid information on health care delivery processes is necessary for appropriate planning and ongoing quality improvement

The importance of credible and timely information is paramount to effective care for the individual, and is especially critical to enabling providers to collaborate. Effective communication at both the organizational and interpersonal levels is the hallmark of productive interdisciplinary collaboration in health care. [53]

PHCAC identified several sources and kinds of data that would provide critical information to support ongoing, primary health care renewal and reorganization. Reliable and complete data with which to inform decision-making is central to achieving effective and appropriate services. Data on the utilization of the system will help:

1. track how people use the system,
2. identify where barriers exist and why,
3. uncover gaps in services and shed light on how resources are utilized.

52. R. Alvarez. (March 11, 2009). E-health in Canada, Transforming health care and fostering innovation, Presentation to NB Department of Health, Fredericton NB.

53. EICP Initiative.2005.The Principles and Framework for Interdisciplinary Collaboration in Primary Health Care.

The following types of information are recommended:

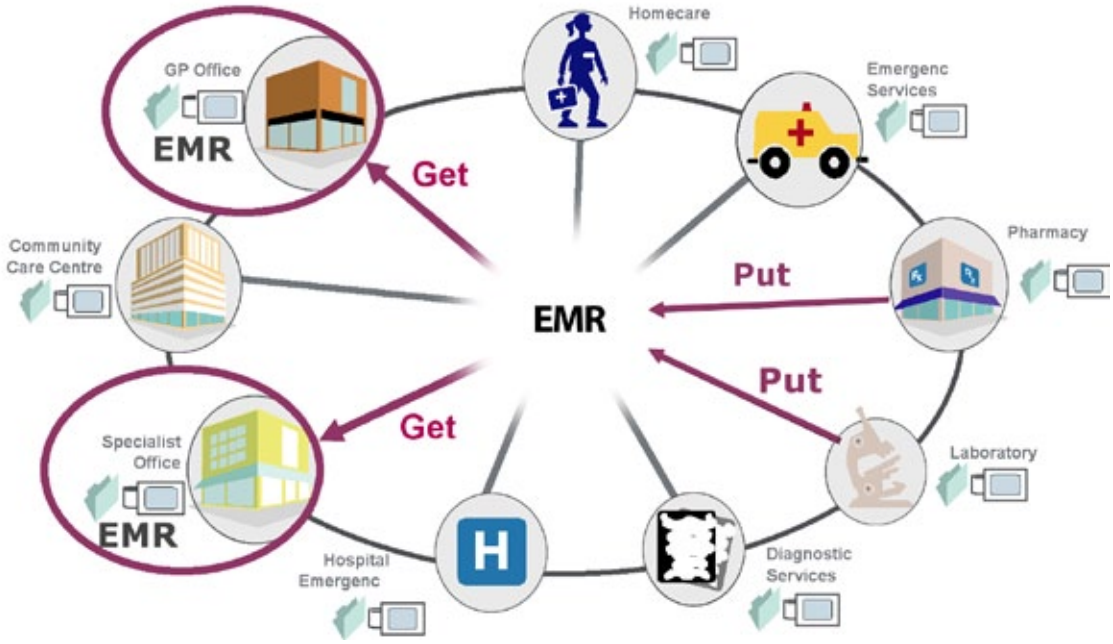
- The need for a dashboard of indicators to acquire an understanding of the types and frequencies of delivery of primary health care services by individual health service providers in order to inform ongoing quality improvement
- Cost comparisons to determine the impact of utilization of the various entry points, particularly as those access points impact on the use of emergency departments. For example, have emergency department visits decreased as the result of access to after-hours clinics? To Tele-care? To CHCs?;
- Information on prescribing practices for drugs, e.g., antibiotics, in the various access venues;
- Information that would provide clarity on where duplication occurs (because of various access points) within the system;
- Data to show where gaps and barriers exist that prevent access to a broader range of service providers whose services also impact health, e.g., home care workers, mental health workers, social service providers, etc.

Data should be fully embedded in electronic information technology. Technological communication supports such as e-mail, the Internet and more recently, electronic health records (EHRs) and electronic medical record (EMRs) networks will contribute to better and more effective care. The following diagram, provides a pictoral overview of the how the EHR will both capture and distribute information.

Information will be more timely, decisions can be better supported by evidence posted in the electronic domain and readily accessible, and information can be more easily shared between and among care providers. The use of virtual communications should be positioned within the present technological structure so that duplication is avoided, and the networks must be reliable, flexible, easily accessible and tested to support a high quality of service. The following Figure, from Canada Health Info way, summarizes the benefits and value of electronic health information technologies and the projected cost and benefit to Canada nationally.

## Graph: Sharing of data and documents

### Interoperable EHR repositories to EMRS




Richard Alvarez, Canada Health Infoway (March 11, 2009) Presentation to NB DH

### Fig 18: Benefits and value of electronic health information technologies

| Access | Quality | Productivity |
|---|---|---|
| • Reduced wait-times for diagnostic imaging services<br>• Improved availability of community based health services<br>• Reduced patient travel time and cost to access services<br>• Increased patient participation in home care | • Improved interpretation of diagnostic and laboratory results<br>• Decreased adverse drug events<br>• Decreased prescription errors<br>• Increased speed and accuracy in detecting infectious disease outbreaks | • Increased access to integrated patient information<br>• Reduced duplicate tests and prescriptions<br>• Reduced family physician prescription call-backs<br>• Reduced patient and provider travel costs |

**Capital cost: $10 billion to $12 billion**
**Benefits: $6 billion to $7 billion *ANNUALLY***

The province is currently developing the "One Patient – One Record" (OPOR) system. This patient centric repository will provide a virtual health record across New Brunswick, enabling a single point of access by authorized healthcare providers anytime, anywhere. Standards will ensure that health information is consistent and comparable across the province and enable the connection of many fragmented and scattered health record systems.

We need to finish what is started. This will involve addressing privacy and security, standard development, change management, appropriate resourcing, and managing expectation. A robust change management strategy will be needed to support clinician adoption and the patient engagement and privacy issues; to address region and jurisdictional concerns; to lobby for interoperability of EMRs, and to provide ongoing evidence of demonstrated benefits by capitalizing on the functionality of these systems.

We need to move forward with implementing electronic medical records in family physician offices and family physician order entry systems in hospitals. We need to build consumer health solutions such as patient portals to support self care and we need to integrate chronic disease management solutions. We need to leverage what we have and implement staged approaches.

There is currently a great deal of work going on to improve the management of diabetes locally, nationally and internationally. It is reasonable to start with diabetes in building a chronic disease prevention and management strategy building on what has been developed successfully. For example the work completed in the Nova Scotia Diabetes Care Program with common data standards, the use of the data repository and ongoing benchmarking and surveillance, can be adopted in New Brunswick. This will enable processes that promote optimal control of diabetes thereby reducing the burden of disease on the individual and health care system.

There must be dedicated funding, incentives or facilitated access to an electronic medical record system. Electronic medical records are essential and integral to the development of a primary health care system that is able to effectively and efficiently provide care. In order to meet the ambitious goal of 50 per cent of family physicians adopting EMRs, we will need to both financially and operationally support family physicians through the change process.

***The Committee has identified the desired attributes of 'timely information' in New Brunswick at the end of the next five years. These attributes are:***

- Care providers and health system planners are supported by robust information systems and adequate staffing resources,
- 50 per cent of family physicians use an electronic medical record, that is interfaced with OPOR
- Tele-health (e-health) supports the delivery of community-based care, with technologies and systems designed and deployed to meet the needs of users.
- One patient/ One record, is fully operational
- Health professionals realize the benefits of the virtual network (especially those working in rural areas) and use it so that information on services and results of services to individual patients/patients are electronically connected and well coordinated.
- A virtual network supports a population health approach, i.e. system is connected with wellness, social support services, education, allied health professionals, as well as with the medical providers.
- The virtual network exists, so that allied health professionals do not necessarily have to be co-located.
- An information (portal) system exists that has clear and consistent data definitions which allow for ongoing tracking of information (utilization, pressure points of access, results of referrals, etc.), evaluation and performance review across all parts of the health care system.

## Pillar 4 – Healthy Living: Where are we now?

Promotion of healthy living in New Brunswick is approached through a number of departments, programs and services. The Department of Wellness, Culture and Sport addresses improved population health through the development and co-ordination of the provincial wellness strategy. The original wellness strategy, first introduced in 2006 was intended to help promote collaboration and provide support for improved population wellness within the province. More recently the department has released the provincial wellness strategy entitled *Live Well, Be Well: New Brunswick's Wellness Strategy 2009-2013*. This document sets out an enhanced four-year strategy that builds on the previous work. It responds to needs, addresses gaps and limitations of the original strategy and builds on new opportunities and trends. *Live Well, Be Well* identifies the following overall goals for all New Brunswickers: improved mental fitness and resilience, increased physical activity levels, increased rates of healthy eating, and increased rates of people living tobacco-free. The action plan that accompanies the wellness strategy outlines approaches to wellness in New Brunswick schools, communities, homes and workplaces and identifies numerous partners in each area. The action plan also includes activities related to surveillance, evaluation and research in which indicators associated with the four strategic goals will be monitored to measure progress towards targets.

Healthy living is also promoted and supported through a number of public health programs and initiatives. The Early Childhood Initiatives program offers prenatal services that foster healthy pregnancy, and postnatal services that promote the healthy development of children from birth to age 5 years. The Healthy Learners in School program develops and supports health promotion efforts that involve all areas of health including physical, emotional and social health. This program also aims to prevent injury and disease, support healthy decision-making and behaviors which will last into adulthood and encourages successful learning. The sexual health program engages a comprehensive sexual health approach to help improve, support and maintain the healthy sexuality of New Brunswick youth. Communicable disease control and immunization programs aim to prevent and control communicable diseases within the New Brunswick population.

The Health Protection Branch operating under the Office of the Chief Medical Officer of Health oversees programs including food safety, water quality, community sanitation including on-site sewage disposal, institutional health, communicable disease control and *Smoke-free Places Act* enforcement. Through education, inspection, enforcement, licensing and monitoring, the Health Protection Branch aims to maintain healthy environments, promote healthy living and reduce the incidence of disease in the province.

Additional examples of provincially supported initiatives include *Talk with Me–Parle moi*, (promoting literacy in children); *Healthy Active Living Program* (promoting healthy eating and activity for seniors); and *My Choices My Health* (promoting self management skills for people living with a chronic disease).

The benefits of healthy living include reducing the incidence and prevalence of chronic diseases that currently present a significant challenge to the health care system.[54] In one study, it is estimated that 40 per cent of chronic illness can be prevented. Epidemiological studies indicate that 25 per cent of all medical costs are attributable to a small number of risk factors like smoking, obesity, physical inactivity, and poor nutrition.[55] The WHO 2008-2013 *Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases* acknowledges that "up to 80 per cent of heart disease, stroke, and Type 2 diabetes and over a third of cancers could be prevented by eliminating shared risk factors, mainly tobacco use, unhealthy diet, physical inactivity and the harmful use of alcohol."[56]

The following Figure shows the incidence of common preventable, risk factors in NB compared to the rest of Canada:

**Figure 19: Preventable risk factors**

| Lifestyle/Health Risk % | NB | Canada |
|---|---|---|
| Current smokers[57] | 21.2 | 19.2 |
| Obese (BMI > 30)[58 59] | 20 | 14.9 |
| Physically Inactive[60] | 52.1 | 46.9 |
| Alcohol Use[61] | 73.8 | 79.3 |
| Insuficient consumption of fruits and vegetables[62] | 33 | 38.8 |
| High blood pressure[63] | 19.8 | 15.9 |

54. NB Department of Health. 2006. A Comprehensive Approach to Chronic Disease Management in New Brunswick.

55. Goetzel, Ron, (ed.), "The Financial Impact of Health Promotion," American Journal of Health Promotion 15 (5), May/June, 2001.

56. 2008-2013 Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases

57. Canadian Tobacco Use Monitoring Survey (CTUMS) 2007 http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/_ctums-esutc_2007/ann-table2-eng.php

58. http://www.gnb.ca/0391/pdf/HEALTHPerformanceIndicators2004-e.pdf p.39

59. http://www.gnb.ca/0391/pdf/HEALTHPerformanceIndicators2004-e.pdf p.39

60. http://www.gnb.ca/0391/pdf/HEALTHPerformanceIndicators2004-e.pdf p.36

61. Canadian Centre on Substance Abuse (2004) Canadian Addiction Survey http://www.ccsa.ca/2004%20CCSA%20Documents/ccsa-004804-2004.pdf

62. Personal Communication Marlien McKay DWCS (Statistics Canada, CCHC 3.1 Sub Sample File 2006)

63. Source: Statistics Canada, CCHS Cycle 4.1, 2007

Overall, the New Brunswick Government has acted to bring improvements around these risk factors by promoting an awareness of these conditions, supporting healthy living initiatives in communities with the aim of encouraging citizens to adopt healthier lifestyles and implementing programs that impact early childhood development, healthy aging, education and wellness.

## Healthy Living: Where do we want to go?

The provincial government, through the Wellness Strategy, envisions a population that is able to reach and maintain their personal health potential and contribution to their communities. In order to achieve this vision, it is important to invest in a healthy future for New Brunswickers. These investments must be based on sound evidence and best practices for promoting healthy lifestyles and healthy environments.

To achieve a healthier population, the New Brunswick Wellness Strategy addresses the determinants of health through evidenced-based means. More specifically, the wellness of New Brunswickers is affected by interactions between social and economic factors, the physical environment and individual behaviours. The continuous improvement of our population health and wellness necessitates a focused, collaborative approach. Healthy living initiatives are intended to take a multi-dimensional approach which ensures that the root causes of problems or issues are addressed; special needs and vulnerabilities of sub-populations are considered and supported; and partnership, cooperation and community engagement with a wide variety of sectors is valued and leveraged. In addition, ongoing leadership and engagement at local, regional and provincial levels are considered crucial ingredients for achieving wellness. It is important to acknowledge that everyone can be an active participant in and a contributor to wellness within New Brunswick homes, communities, schools, and workplaces.

Since March 2009, the Department of Wellness, Culture and Sport, in collaboration with the Healthy Eating Physical Activity Coalition of New Brunswick, have introduced a comprehensive community development model called regional wellness networks. A wellness networks model is evidence-based and facilitates collaborative action and progress towards the strategy's vision. Wellness networks are formal or informal community or regional initiatives that bring leaders from various backgrounds together to address wellness related issues. Because wellness networks are grounded in partnership with mutual benefit and accountability at the core, they are a very useful model from which to organize community efforts toward enhanced wellness. Currently, nine demonstrational Regional Wellness Networks seek to provide sustainable coordinated systems and infrastructure to: increase community awareness, transfer knowledge between stakeholders and leaders, and improve participation in wellness related initiatives. In order to achieve optimal population

health and wellness, primary prevention should be expanded to address the needs of New Brunswickers where they live, work, learn and play.

Keeping New Brunswickers safe at home, at work, at school and at play is a related population health challenge. Prevention of unintentional injuries is often described as a hidden epidemic that results from events such as motor vehicle collisions and falls. Unintentional injuries cost the province more than $388 million and 266 lives in 2007[64]. That same year, the health, well-being and quality of life of over 75,000 other New Brunswickers and their families were adversely impacted by injuries that were largely predictable and preventable. Preventing unintentional injuries is everyone's responsibility and we need to engage the population in making injury prevention a priority. The first step is to develop a provincially co-ordinated strategy, based upon community involvement and partnerships, for the prevention of unintentional injuries across all ages.

A complementary strategy that should be pursued is to conduct chronic disease prevention research in order to develop a chronic disease prevention action plan for New Brunswick, based on sound return on investment methodology. This approach will ensure that investments invariably (reduce and) prevent unhealthy lifestyle chronic diseases and conditions, leading to significant health care cost savings.

> **EMPcare@home** *is the name of a tele-home care project that was implemented in order to determine if the combination of tele-home care, timely staff intervention, and an enhanced patient education program would improve care by empowering the client/ caregiver and ensuring that the providers had timely access to critical data. Vital sign data was sent over the telephone line and when retrieved, specialized software quickly alerts clinicians of parameter breaks (through automated colour coding and triaging of data) allowing for quick client prioritization for intervention. This helped to break the cycle of emergency room visits and hospital readmissions.*

However the reality is that many New Brunswickers will have to live with chronic conditions. It is important that people learn to be active participants in providing their own care and managing their condition. In 2006, the Canadian Home Care Association recognized EMPcare@home "as an outstanding, remarkable and sustainable program that demonstrably and tangibly improved the quality of life for patients."[65]

Self-care requires not just knowledge and education, but also a supportive environment, motivation, good judgment and a willingness to accept accountability

64. New Brunswick Department of Public Safety, Annual Report Office of Chief Coroner (2007) http://www.gnb.ca/0276/Coroner/index-e.asp

65. http://www.cdnhomecare.ca/media.php?mid=1744

for one's health. There are approaches that have been designed to assist and support receptive individuals in the development of their care plans, with the result that individuals can remain living longer in their community without the need to seek emergency care or admission to hospital. In the long run, this focus on self-care can bring about a reduction in wait lists to hospitals and institutions and at the same time, free up financial and human resources to be use elsewhere in the health care system. We must continue to develop resources to be used and build links with other community based organizations and agencies that will assist New Brunswickers to confidently manage their personal health.

***The Committee has identified the desired attributes of healthy living in New Brunswick at the end of the next five years. These attributes are:***

- The public understands the social and biological factors that contribute to good health (determinants) and makes lifestyle decisions accordingly.
- Benchmarks related to health are set and the health of the population is monitored for continuous improvement, and a "balanced scorecard" made public on a designated basis.
- Government promotes healthy living as a feature of the agenda in all government departments with action strategies that include primary prevention, injury prevention and health promotion.
- Government supports healthy communities through assertive regulation and legislation such as compulsory helmet use, tobacco restriction, gambling restrictions , salt restrictions, banning of cell phone use in cars etc.
- Patients set the priorities and are part of the goal setting for their health and well-being.
- Patients are comfortable with the training and education they receive on self-care of chronic conditions so that symptoms do not escalate unnecessarily.
- Healthy living is recognized as the anchor point in developing a sustainable primary health care system and supported through the school system.

# SECTION 4
# RECOMMENDATIONS

Section 3 reviewed the basic components that support primary health care and identified characteristics of an energized and sustainable primary health care system. This information was carefully considered to develop a roadmap of how to get there. Our directions are fairly simple, but we believe these provide adequate direction for New Brunswick, while allowing the flexibility to make course adjustments. We have one overarching recommendation, which is supported by 12 actions.

**All New Brunswickers will have access to a family practice team, that is able to provide them with, personalized , comprehensive and co-ordinated primary health care services.**

1. **All New Brunswickers have access to a family physician.**
2. **Establish family practice teams with a minimum core staff of a family physician, nurse and/or nurse practitioner with appropriate administrative support that will provide a 'medical home' for their registered patient population**
3. **Develop methodologies and infrastructure to provide the family practice team with basic information concerning the practice health care needs (a practice panel) as well as the community's population health baseline and benchmarks.**
4. **Establish a staffing model that will enable the family practice team to expand with required allied health care providers to optimize service delivery to the registered patient population within the 'medical home'.**
5. **Explore and examine alternative pay and remuneration models that will attract and retain skilled professionals in the family practice teams.**
6. **Create funding models that will support adoption of electronic medical records to meet the information needs of the family practice team.**

7. **Establish a provincial, interprofessional continuing education program that will enable family practice teams to develop the appropriate cognitive, behavioural and attitudinal skill sets needed to optimally manage within team based practices.**

8. **Ensure that these sites provide opportunity for interprofessional clinical practicum opportunities.**

9. **Continue and expand funding models that support adoption of telehealth technologies to enable patients to receive as much care as possible within their 'medical home'.**

10. **Develop processes to ensure that the community leaders and family practice teams regularly meet to identify and collaborate on issues that impact the population's health.**

11. **Establish a provincial blueprint and action plan that will provide direction on the roll-out of these teams across the province including processes regarding governance and lines of reporting and accountability across the medical home, regional health authority and Department of Health**

12. **Invest in and promote primary prevention of disease and injury, healthy lifestyles and healthy environments in homes, communities, schools and workplaces.**

# SECTION 5
# ADVICE TO THE DEPARTMENT OF HEALTH

The committee's mandate was "to develop and implement new ways of improving access and delivering primary or 'first contact' health care to NBers". Specifically the committee was asked

- *make recommendations on how different components of the primary health care system should be linked;*
- *to identify strategies to support expansion of the Primary Health Care Network;*
- *to review and address inefficiencies in the primary health care system and recommend corrective action.*

This report has outlined key factors considered in preparing these recommendations.

The review was organized under the four pillars that support the conceptual model of primary health care; access, teams, timely information and healthy living. These pillars created a blueprint of the transformations needed in primary health care with detailed progress markers to benchmark achievement.

Sustainable health care demands that we work as a team, on all levels from the patient care to governance. It is incumbent on all health care providers to urge and support individuals and communities to adopt healthy lifestyles and build healthy communities. People suffering with chronic illnesses can be helped to self-manage their condition. They can be assisted in setting personal and achievable health goals, and with proper training and supports from professionals, they will be better able to live more fully and longer in their communities without needing the hospital system. We need to establish primary health care teams that will provide patients with the right support by the right person at the right time and right price. We need to use technology to explore new service delivery models so that patients have access to information and services when they need it. Primary health care services can be improved by access to patient's health information to support care planning. Overall health care services require robust surveillance and monitoring to enable continuous quality improvement to ensure that we are optimizing resources to best meet health and wellness needs.

This will require investment in primary health care renewal. While transforming primary health care has the potential to lower costs and increase sustainability, it is also possible that instead of replacing services, there is a possibility of duplication services. Strong business cases must be developed, acted on, and monitored to ensure that services are not duplicated and make good business sense.

Clearly, leadership at a high level is needed to plan, implement, monitor and evaluation the progress of PHC delivery across the Province. This committee is interested and willing to continue to work with government on the next steps of this ambitious plan.

# Appendix 1 - Primary Health Care Advisory Committee

## Terms of Reference

**Mandate:**

To develop and implement new ways of improving access and delivering primary or "first contact" health care to New Brunswickers.

**Focus:**

To review and make recommendations on more accessible and effective primary health care service delivery models for use around the province.

**Deliverables:**

1) Provide advice to the Department of Health on any item regarding Primary Health Care referred to the Committee.

2) Review the Primary Health Care Network for New Brunswick and provide advice and recommendations on how different components of primary health care should be linked.

3) Identify strategies to support expansion of the Primary Health Care Network.

4) Review and address inefficiencies in the Primary Health Care system and recommend corrective action.

**Term:**

The committee will have a four-year term with a review of function at end of term.

**Membership:**

- FCS Representative (1)
- Wellness, Culture and Sport Representative (1)
- New Brunswick College of Family Physicians (1)
- New Brunswick Medical Society (2)
- Nurses Association of New Brunswick (1)
- Allied health professionals (2) From within the RHAs
- RHA (2) with primary health care responsibilities From within the RHAs
- Department of Health (5): ADM, Medicare, Public Health, Addictions and Mental Health, Aboriginal Liaison
- Independent Primary Care Practitioners GPs (2), NP (1) (DoH Appoints)
- Individuals may be invited on an ad hoc basis to present to the committee on specific issues

**Co-Chairs:**

Dr. Aurel Schofield, Coordinator for Medical Education (Francophone)

Ken Ross, Assistant Deputy Minister, Addictions, Mental Health and (Primary Health Care), DoH

**Committee Support:**

The Department of Health will provide support to facilitate and enable the work of the committee.

**Reporting:**

The committee will report through its chair to the Deputy Minister, Department of Health.

November 28, 2007

# Appendix 2

## Primary Health Care Advisory Committee Membership List

The list below is of current members of the PHCAC as of November 1st, 2010.

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|---|---|
| **Dr. Aurel Schofield (Co-Chair)** | Assistant Vice-Dean<br>Faculty of Medical Sciences, Coordinator of francophone health training in New Brunswick |
| **Ken Ross (Co-Chair)** | Assistant Deputy Minister<br>Addictions, Mental Health, Primary Health Care,<br>Department of Health |
| **Bronwyn Davies** | Director<br>Primary Health Care,<br>Department of Health |
| **Geri Geldart**<br><br>Care Services, | Vice President<br>Community Health Centres and Primary Health<br><br>Horizon Health Network |
| **Suzanne Robichaud** | Vice President<br>Primary Health Care,<br>Vitalité NB |
| **Dr. Robert Boulay** | Family Physician<br>Department of Family Medicine,<br>NB College of Family Physicians |
| **Dr. Brian Craig** | Chief of Family Medicine<br>RHA B, Zone 2,<br>NB Medical Society |
| **Dr. Eilish Cleary** | Chief Medical Officer<br>Department of Health |

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|---|---|
| **Dr. Carol Deveau** | Family Physician<br>Horizon Health Network |
| **Michelle Bourgoin** | Director<br>Wellness,<br>Department of Wellness, Culture and Sport |
| **Doreen Legere** | Manager<br>Therapeutic Services,<br>Horizon Health Network |
| **Bill MacKenzie** | Director<br>Policy, Legislation & Intergovernmental Relations,<br>Department of Social Development |
| **Michel Leger** | Director<br>Salaried Physican Services,<br>Department of Health |
| **Thérèse Thompson** | Nurse Practitioner,<br>Vitalité NB |
| **Jean Bustard** | Director,<br>Extra Mural Program,<br>Department of Health |
| **Shauna Figler** | Nursing Practice Consultant<br>New Brunswick Nurses Association |
| **Dr. Mike Perley** | CCFP, FCFP, Family Medicine<br>New Brunswick Medical Society |
| **Dr. Dawn Marie Martin** | Family Physician<br>New Brunswick Medical Society |