From Innovation to Action:

The First Report of the Health Care Innovation Working Group

‘This year marks the 50th anniversary of Medicare. Premiers want to create a new approach that provides better quality care while being sustainable.’

Premier Brad Wall

‘We run 13 distinct health care operations now across this country and certain provinces are doing certain things better than others. We think there is a great opportunity for us to be able to collaborate together.’

Premier Robert Ghiz

‘It’s a bold agenda. We need to not just innovate, but also be sure that we are sharing those innovations all across the country.’

Premier Christy Clark

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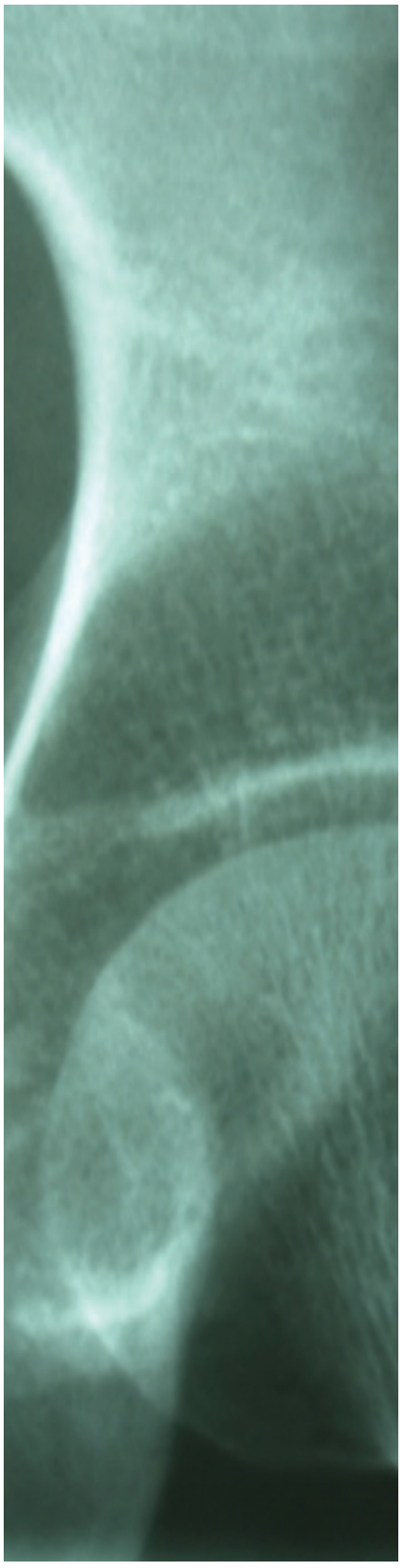


Executive Summary

I. From Innovation to Action in Health Care

Health care is consistently ranked by Canadians as a major priority. While Canadians are justifiably proud of the development of Medicare, we can improve health care and improve value for taxpayers.

In January of 2012, Premiers met as the Council of the Federation to discuss a range of health care issues facing Canadians. At that meeting, Premiers agreed on the necessity of embracing innovation in order to improve care.[1]

The benefit in embracing innovation is twofold. First, because each province and territory has its own health care system, insightful leading practices continuously emerge across the country that can be shared nationally to improve patient care. Ideas and innovative ways of delivering health care services need to be shared more effectively if we want to provide the best health care in the world to the public we serve and represent everyday.

Secondly, we can improve the value of our health care systems through innovation. Provincial and territorial leaders want to create a new approach that provides better health, better care, and better value to our citizens. From Innovation to Action in Health Care represents our commitment to this goal. Moving forward will not be easy but we feel that we have a responsibility and obligation to work more effectively together to provide better value for patients.

The Health Care Innovation Working Group was asked to focus on three priority areas:

- **Clinical Practice Guidelines** that promote greater consistency in the delivery of evidence-informed care;
- **Team-based Health Care Delivery Models** that encourage all health professionals to work to their full professional capacity to better meet patient and population needs in a safe, competent, and cost effective manner; and
- **Health Human Resource Management Initiatives** that allow for a more cooperative, needs-based approach to human resource planning reducing competition among jurisdictions for resources.

These priority areas were chosen for a number of reasons. First, they can significantly improve outcomes for patients. Second, they help address very real and pressing issues within our respective health care systems around chronic disease prevention and management, seniors care (due to our aging populations), and rural and remote health care delivery. Last, they are areas where leading practice or innovative models exist across the country.

Costs of these challenges are great. Major chronic disease by itself accounts for $93 billion in Canada annually in direct and indirect health care costs.[2] These numbers do not include the profound human cost or impact on the quality of life for the millions of Canadians living with these preventable and manageable diseases.

The recommendations on clinical practice guidelines and team based models highlighted in this report will result in improved quality of life for Canadians.

Cardiovascular disease is one of the leading causes of premature death and disability in Canada, accounting for about 70,000 deaths per year – almost 30 per cent of all deaths. Over 1.6 million Canadians live with cardiovascular disease, which can severely limit day-to-day life.[3]

A 2010 report from the Conference Board of Canada has estimated that the direct and indirect annual cost of cardiovascular disease was $20.9 billion. Of this total, the direct annual costs of cardiovascular disease related to hospitalizations were estimated to be approximately $2.9 billion (14% of the total).[4] Through the recommended C-CHANGE guidelines we can better manage issues around cardiovascular disease, reduce hospitalizations, and make a difference with respect to not only the quality of life for cardiovascular patients, but also reduce the cost of cardiovascular disease on the health system.

The Canadian Diabetes Association (CDA) and the Canadian Association of Wound Care (CAWC) have noted that:

- About 345,000 of the 2.7 million Canadians living with diabetes will develop a diabetic foot ulcer in their lifetime.
- Individuals with diabetes are 23 more times more likely to be hospitalized for a limb amputation than someone without diabetes.
- Diabetic foot ulcers cost our healthcare system more than $150 million annually.
- An estimated 85% of all leg amputations are the result of a non-healing foot ulcer.[5]

The CDA has also noted that research on best practices in prevention suggests that most diabetic foot ulcers and amputations can be prevented and that between 49% and 85% of amputations can be avoided through education, monitoring and early treatment.[6] The recommended guidelines on diabetic foot ulcers are about preventive care, and helping those Canadians who suffer from diabetes avoid the physical and emotional trauma of an amputation.

Emerging themes for future work include looking at other opportunities to work together to improve both the quality and value of health care service. Work in the area of generic drugs holds promise in helping us achieve better value through lower drug costs in our respective jurisdictions. This would build on the current work being undertaken by province and territories related to brand name pharmaceuticals.

As well, the degree to which the adoption of Lean (continuous quality improvement) in provincial and territorial health systems is resulting in improved health outcomes and better patient experiences at lower costs merits close attention.

If Canadians are going to continue to enjoy safe, timely, access to health care, we must do more to embrace innovative, collaborative, and value added practices.

II. Making Good Health Care Better

This work is built on a strong foundation. Canada's provincial and territorial health programs have served Canadians well over many years. Today, we remain among the healthiest people in the world, with an increase in average life expectancy of 10 years since the 1960s. Canadians continue to live longer and healthier lives due, in large part, to the high quality health services we receive.

Since 2004 provinces and territories have worked together on joint priorities and a vision for health – that Canadians will have health services that provide quality health care, and promote the health and well-being of Canadians in a cost-effective and fair manner.

We have made progress. However, there is room for improvement.

International performance comparisons indicate that Canada lags many other industrialized countries on the quality of health services we receive for the price we pay. The Conference Board of Canada gives Canada's health system a 'B' grade and places it 10th out of 17 peer countries.[7]

This is not the outcome that provinces and territories aspire to achieve. The work of the Health Care Innovation Working Group is one step taken towards turning average performance into high performance. There is great potential for innovation and higher quality care and we can deliver health care services at lower cost.

III. Recognizing Our Challenges

Our focus on innovation seeks to enhance provincial and territorial capacity to better meet existing and emerging challenges in our health care systems:

- Canada's aging population has created new challenges in the areas of seniors care and prevention and management of chronic disease.
- Canada's immense size, and the low density of our populations creates challenges around providing access to primary care and emergency services for Canadians living in rural and remote areas.
- These challenges are compounded by rising health care costs and growing fiscal pressures on provincial and territorial governments.

IV. Summary of Recommendations

Recognizing that provincial and territorial governments are responsible for managing their respective health care systems, the Health Care Innovation Working Group makes the following recommendations. The recommendations identify specific best practices in health innovations. They also provide an approach and timetable for implementation, follow-up and reporting, as well as considerations for future work.

Recommendations for Clinical Practices

1. **It is recommended that** Premiers direct Ministers to work with their respective clinical communities and health officials with the objective of adopting the following clinical practice guidelines:
   - C-CHANGE Guidelines for Heart Disease.
   - The Registered Nurses' Association of Ontario (RNAO) Guidelines for the Assessment and Management of Foot Ulcers for People with Diabetes.
2. **It is recommended that** Premiers direct Ministers to work with their respective clinical communities and health officials with the objective of developing within six months provincial and territorial-specific deployment strategies.
3. **It is recommended that** Premiers direct Ministers to report back to the Council of the Federation through the Health Care Innovation Working Group within twenty-four months with an update on progress on implementation.
4. **It is recommended that** Premiers encourage national health provider organizations to collaborate with their provincial and territorial provider organizations, where applicable, to promote the adoption of the recommended clinical practice guidelines.
5. **It is recommended that** Premiers direct the Ministers to consult with their respective provider and patient groups to continue to identify other leading practices in clinical practice guidelines that could be shared amongst provinces and territories and to identify a proposal for sustaining this initiative going forward.

Recommendations for Team Based Models

6. **It is recommended that** Premiers direct Ministers to consider adapting the elements and key success factors of the following models that best address respective jurisdictional needs:
   - Access to Primary Care
     Chinook Primary Care Network: Taber Clinic (AB)
     Family Health Team Clinic: St. Michael's Hospital (ON)
     Modele des Groupes de médicine de famille (QC)
     Long and Brier Islands Community Para-medicine (NS)
   - Access to Emergency Services in Rural Communities
     Collaborative Emergency Centre (NS)

- Access to Enhanced Homecare
  Virtual Ward (MB)
  Virtual Ward Acute Home-Based Treatment (BC)
  Extramural Program (NB)

7. **It is recommended that** Premiers direct the Health Care Innovation Working Group to define options for a platform for ensuring the ongoing identification and dissemination of information on innovative models in order to help promote the adoption of leading practices.

Recommendations for Health Human Resource Initiatives

8. It is recommended that Premiers endorse the following Guiding Principles for Health Human Resource Management:

   a) **Share Evidence:** Provinces and territories should share health human resource labour market information to support effective decision-making.

   b) **Seek Innovation:** Provinces and territories should share leading practices and work closely together on innovative approaches to managing labour costs and reducing competition.

   c) **Respect Interdependence:** Provinces and territories should recognize that health human resource management decisions made by individual jurisdictions may have an impact on other jurisdictions.

   d) **Make Informed Decisions:** Provinces and territories should explore and act on areas of mutual interest and consider common approaches to health human resource management.

   e) **Integrate Planning:** Provinces and territories should work together to strive for an appropriate supply of health human resources at the provincial and national levels.

9. **It is recommended that** Premiers direct the Ministers to work together, on a voluntary basis, on creating a health human resource website to facilitate better communication of information about health human resources labour markets across provinces and territories.

10. **It is recommended that** Premiers direct Ministers to undertake, on a voluntary basis, the following health human resource initiatives and report back to the Council of the Federation on progress:

    a) **Shared workforce projections:** Work with faculties of health sciences, nursing, medicine and regulated health service providers to adapt and apply leading practices in needs-based planning, and work across health professions to assess changing health needs against current and projected work force supply across jurisdictions. This joint work would leverage several models including: Ontario Population Needs-Based Physician Simulation Model, the Magnetic Resonance Imaging (MRI) Technologist Simulation Model and other existing models across Canada.

    b) **Shared data sets and analysis:** Create and maintain a core data base that would permit jurisdictions to share comparable qualitative and quantitative data sets such as: vacancy rates and/or job-posting numbers; legislative initiatives; utilization and productivity pilot projects; rural recruitment and retention strategies; common definitions of key demand and supply metrics.

    c) **Sharing Training Capacity:** Analyse training capacity across jurisdictions for all health professionals in relation to current and projected health care needs, taking into account the adoption of innovative delivery models across jurisdictions and acknowledging the need to share funding to provide high-quality training for "low- critical-mass" programs.

Recommendations on Generic Drugs

11. **It is recommended that** Premiers direct Ministers to undertake the following with respect to generic drugs:

    a) Identify three to five generic drugs to include in a provincial/territorial Competitive Value Price Initiative that would result in better prices for generic drugs.

    b) Initiate a national competitive bidding process by Fall 2012 that would result in lower prices taking effect by April 1, 2013.

Recommendations for Advancing the Work

12. **It is recommended that** Premiers direct the Health Care Innovation Working Group to monitor the progress made on the initiatives contained in From Innovation to Action in Health Care.

All provinces and territories contributed to the work of the Health Care Innovation Working Group and share the goals underlying the present report. Provinces and territories intend to implement the measures and recommendations outlined in the report as they deem appropriate to their health care system. All provinces and territories will continue to share information and best practices with one another.

1.0 Introduction: From Innovation to Action

1.1 The Health Care Innovation Working Group

In January of 2012, Premiers met as the Council of the Federation to discuss a range of health care issues facing Canadians. At that meeting, Premiers agreed on the necessity of embracing innovation. Provincial and territorial leaders want to create a new approach to health care that provides better quality care that is sustainable. Providing the best health care in the world to the public we serve and represent is a meaningful and motivational goal that will not be achieved if provinces and territories fail to embrace innovative approaches to health care delivery.

To support this goal, the Health Care Innovation Working Group (hereafter 'the Working Group') was established under the leadership of Premier Robert Ghiz and Premier Brad Wall to identify innovations in health delivery that could be shared across Canada. Pockets of high performance and innovative practice exist from coast to coast. The challenge is to identify the innovations that can be shared across Canada through jurisdictions with varying contexts.

The Working Group was asked to form theme groups to begin their work on innovative practices in three inter-related areas:

- **Clinical Practice Guidelines** that promote greater consistency in the delivery of evidence- based care;
- **Team-based Health Care Delivery Models** that encourage all health professionals to work to their full professional capacity to better meet patient and population needs in a safe, competent, and cost effective manner; and
- **Health Human Resource Management Initiatives** that allow for a more cooperative, needs-based approach to human resource planning reducing competition among jurisdictions for resources.

The establishment of the Working Group is important in a number of ways:

- This is the first time there has been this level of engagement and commitment to a provincial-territorial cause from the Premiers.
- The level and nature of the provincial-territorial collaboration that went into this report and the recommendations that follow is unprecedented. Premiers directed the Health Care Innovation Working Group to engage on two of the theme areas (i.e. clinical practice guidelines, team based models) with those who will be part of implementing changes including the Canadian Medical Association (CMA), the Canadian Nurses Association (CNA), the Health Action Lobby (HEAL) and others.[8]

The co-chair Premiers oversaw the activities of the Working Group through their respective deputy ministers of health. To focus the effort, a group was established to work in each of the three theme areas. On clinical practice guidelines and team based models health care providers and health officials worked hand in hand to identify leading practices in innovation for presentation to the Council of the Federation in July in Halifax.

1.2 Principles for Innovative Change:

Better Health, Better Care and Better Value for the public and patients we serve and represent every day.

The Working Group is motivated by the idea of spreading innovative models that positively affect the lives of the public and patients we serve. The approach taken was one part pragmatic and one part visionary. On the pragmatic side our respective health systems are faced with very real challenges:

- A growing need to do more for the health of our seniors as our populations age;
- A growing need for improved prevention and management of chronic disease;
- Growing need for primary and emergency services in rural and remote areas; and
- Continuing and mounting fiscal pressures as health care costs increase.

These challenges are interconnected and provincial and territorial leaders needed a framework to address them. What visionary and strategic foundation would be used for innovative models and approaches? The Working Group framed their approach on the basis that health care should be designed to accomplish three objectives simultaneously:

- Improve the health of the population;
- Enhance the patient experience of care (including quality, access and reliability); and
- Reduce, or at least control, the per capita cost of care.[9]

It has become increasingly clear that excellence, high performance, and high value health care will not be achieved unless strategic initiatives and innovative models proceed under a balanced umbrella of linked goals. The whole picture needs to be taken into consideration when attempting to catalyze change.[10]

The Working Group approached its work with a focus on the following points:

Better Health: is built on a foundation of health promotion and illness prevention. The principles underscore the need for reasonable or equitable access to quality health care services, based on relative health need rather than ability to pay.

Better Care: means patient-centred care, with seamless access to a full continuum of care. This depends on a strong primary health system that would relieve stress on institutions, and supports more care in the home. The principles also call for stepped-up efforts to improve quality and appropriateness of care.

Better Value: is found in a sustainable system that offers universal access to adequately resourced quality health services. It is measured and monitored, and emphasizes accountability and public reporting.

These points served as the lens to assist two of the theme groups (clinical practice guidelines, team based models) when they reviewed and selected from a number of health care innovations, some of which moved forward as recommendations in this report.

Any consideration of how innovations in health care delivery can be more broadly deployed from one jurisdiction to another should be based on a consensus on some of the key challenges and opportunities facing our respective health care systems. To the extent that commonality can be established, the likelihood of being able to leverage innovations in clinical practices, team based models of care, and health human resource initiatives are that much greater.[11]

2.0 Health Care Challenges and Opportunities

2.1 The Challenges: Geography, Demographics, and Sustainability

We recognize that provincial and territorial health systems face pressing challenges in providing access to safe, timely, high-quality health care to Canadians. The Working Group was asked to pay specific attention to the prevention and management of chronic diseases, the special needs of Canada's growing ranks of seniors, and the unique needs of Canadians living in rural and northern Canada. The following assessment of the challenges of geography, demographics and sustainability underscores the importance of that focus.

Geography: Canada has the second largest geographic area in the world, second only to Russia, with a population density of just 3.5 persons per square kilometre, although only about 11 per cent of Canadians live in rural areas (defined to be communities of 1,000 persons or less).[12]

- Rural areas of Canada, especially the territories, face problems both in accessing care and the quality of health care available in them.
- Geographic realities and widely dispersed populations make the delivery of some services in rural and remote areas extremely difficult.

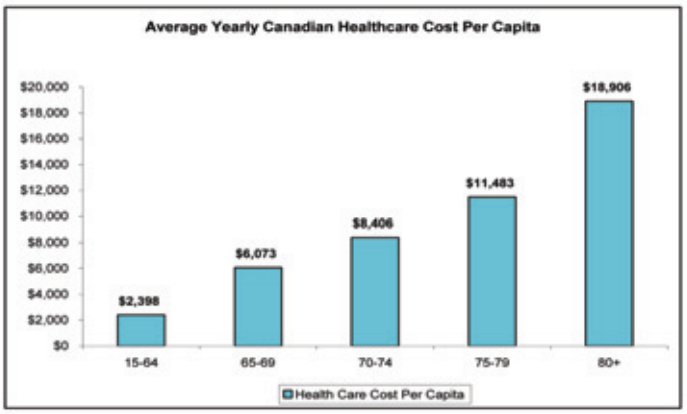
Demographics: The Canadian population is aging predominantly from increases in life expectancy and decreasing fertility rates. It is estimated that the number of seniors will exceed the number of children by 2015, which poses challenges for health care providers:

- Care for seniors is more resource intensive as they age. It is estimated that growth in health care costs due to an aging population will be about 1% per year between 2010 and 2036.[13]
- Almost three-quarters of people over 65 years of age suffer from at least one chronic disease. These individuals accounted for 40 per cent of health care use, had three times as many health care visits as seniors with no chronic conditions, and, on average, take six prescription medications.[14]

Sustainability: The percentage of public resources directed to health care is well known and underscores the importance of making the delivery of health services more sustainable. Innovative models for better health and better care must be made within the context of better value.

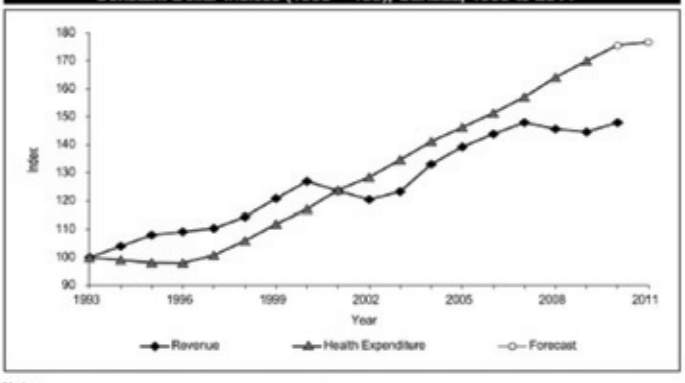
- On a national basis, Canada spends approximately $200 billion per year (approximately $5,600 per person) on health, about 11.4 per cent of our gross domestic product. We rank sixth overall among OECD countries for both per cent of GDP spent on health and per capita spending. Our ranking has remained relatively constant over the past decade, with both measures tending to increase as our per capita income increases.[15]
- In 1993, health care spending accounted for 32.8 per cent of provincial and territorial program spending. By 2010, health care spending rose to 37.8 percent.[16] Our health systems also employ a large number of Canadians, and compensation is a major part of provincial expenditure on health.
- Since 2001, increases in health expenditure have outpaced the rate of revenue growth. According to CIHI, "By 2010, revenue at 1997 price levels was 48% higher than in 1993." The Cumulative increase in health expenditures is 76% higher during that period."[17]

We believe that Canada needs to re-focus its efforts to improve overall value for the dollars spent on health care. Increasing value is essential to ensuring the sustainability of health care delivery in Canada.[18]



Source: *National Health Expenditure Trends, 1975-2011.* Canadian Institute for Health Information

Figure 36: Provincial/Territorial Government Revenue and Health Expenditure, Constant Dollar Indices (1993 = 100), Canada, 1993 to 2011



Note
FMS data is estimated for 2009 and 2010.
Sources
Financial Management System, Statistics Canada; Provincial Public Accounts, Budgets, Main Estimates.

2.2 The Opportunities: Building on Our Strengths

Each province and territory runs its own health care system, because of this, Canada is a testing ground for innovative health care delivery approaches as jurisdictions respond to new and emerging challenges. To identify and embrace promising innovations, we will need to build on the key strengths of our health care systems:

Health care providers: Canada's nurses, physicians, pharmacists, physiotherapists, psychologists and many other health care professionals are among the best trained in the world. As pointed out in the 2007 report *A Framework for Collaborative Pan-Canadian Health Human Resources Planning:*

> *"…people are the health care system's greatest asset. Canada's ability to provide access to high quality, effective, patient-centred and safe health services depends on the right mix of health care providers with the right skills in the right place at the right time."* [19]

Health care researchers and educators: Canadian health services researchers and educators are also among the best in the world. The Working Group believes research and educational efforts across the county are invaluable in developing and promoting team based care, best practice clinical practice guidelines and research on human resources. We must take better advantage of this knowledge infrastructure to advance innovation in health care.

Health care technology: The Working Group believes there are opportunities to use technology more strategically to enhance the delivery of health services. Telehealth and telehomecare are two notable examples of how technology can positively affect the delivery of health services, making them more timely and sustainable. In addition, digital data is enabling remote consultations and electronic transmission of images, offering opportunities to address rural and remote health care delivery challenges.[20]

These opportunities further informed the recommendations put forth in the following section. Where challenges exist in managing chronic disease, seniors care, and health care delivery in rural and remote areas opportunities for innovative improvement exist in the area of clinical guidelines, team based care, and health human resource management.

3.0 From Innovation to Action: Recommendations

3.1 Clinical Practice Guidelines

When a patient visits a health care provider they assume the care they are receiving is the best care for their condition. Patients and their families want care that is evidence-informed and clarifies the best approach to take when treating a particular health condition. If you go to a provider to receive treatment for complications in relation to diabetes you want the treatment to be the most appropriate given your particular circumstances. Though this may seem obvious, all too often patients do not receive the best treatment option when receiving care. Reducing variation in care, in the form of establishing best practice in clinical care will allow for better patient outcomes.

Clinical practice guidelines have been defined as "systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances."[21] Although Canadian researchers are world leaders in providing evidence-informed assessments of clinical practice guidelines, Canada does not have a systematic approach for developing and disseminating guidelines, or any systematic way of ensuring the quality of the guidelines produced.[22]

In August 2010, the Premiers launched an initiative seeking greater consistency in clinical practice guidelines.[23] This work eventually became part of the Health Care Innovation Working Group process. In November 2011 the CMA hosted a summit on clinical practice guidelines.[24] This event provided an opportunity for provider groups, stakeholders, experts, and provincial and territorial officials to consult on the goal of greater consistency in clinical practice guidelines.

Guidelines for Chronic Disease Prevention and Management

Within Canada, there is increasing concern about chronic disease prevention and management. An estimated 16 million Canadians – roughly half the population – live with some chronic disease resulting in profound economic impacts. It is estimated that major chronic diseases in Canada account for $93 billion/per year in direct and indirect health care costs.[25] In addition to the economic effects, the human cost of chronic disease is profound with nearly three quarters of all deaths in Canada resulting from only four types of diseases, of which three are commonly chronic (cardiovascular diseases, diabetes, and chronic obstructive pulmonary disease).[26] The fourth disease is cancer. The impact of chronic disease on patients and families is immense. Strategies and guidelines designed to mitigate the impact of chronic disease are needed to allow individuals to lead the highest quality of life possible.

In developing criteria for assessing potential clinical practice guidelines, the Clinical Practice Theme Group considered a number of factors. These included:

- Incidence and prevalence of the diseases the guidelines address;
- Level of impact the guidelines would have on patients;
- Disease's burden or level of cost to the health care system and;
- Availability of high-quality, evidence-informed clinical practice guidelines for the disease.

After applying the criteria above to a number of areas, the clinical practice theme group recommended looking at clinical treatments for cardiovascular disease and diabetes, which are challenges confronting all jurisdictions in light of our aging populations and high levels of chronic disease. These areas are starting points for collaborative work across Canada in this area.

A Balanced Approach

Clinical practice guidelines:

Contribute to better health through harmonized guidelines for prevention;

Enhance the quality of care provided by practitioners, organizations and systems and improve the patient experience; and

Contribute to better value by encouraging more appropriate use of resources by care providers.

Source: Saskatchewan Ministry of Health

Cardiovascular Disease

Cardiovascular disease is one of the leading causes of premature death and disability in Canada, accounting for about 70,000 deaths per year – almost 30 per cent of all deaths. Over 1.6 million Canadians live with cardiovascular disease, which can severely limit day-to-day life.[27]

The risk factors for heart disease are well known – obesity, smoking, high blood pressure, high cholesterol and inactivity.

Direct and Indirect Costs of Cardiovascular Disease

According to a 2010 Report of the Conference Board of Canada the estimated direct and indirect costs of cardiovascular disease are $20.9 billion per annum in 2005 dollars.

Of this total, the direct costs of cardiovascular disease related to hospitalizations were estimated to be approximately $2.9 billion per annum (14% of the total).

Source: *The Canadian Heart Health Strategy: Risk Factors and Future Cost Implications.* The Conference Board of Canada, 2010.

The good news is that many of those risks can be modified with proper management, such as programs to lose weight or quit smoking, or by taking medications to control high blood pressure and high cholesterol.

The Clinical Practice Theme Group found there are hundreds of sometimes conflicting guidelines for heart disease, creating confusion among clinicians and the patients that they serve. To reduce confusion and promote better care, it was recommended by the theme group that the *C-CHANGE Guidelines for Cardio-vascular Disease* recently published by the Canadian Cardiovascular Harmonization of National Guidelines Endeavour (C-CHANGE) be adopted Canada-wide. The C-CHANGE guidelines were the result of the work of eight organizations that worked together on harmonizing and integrating more than 400 recommendations into 89 key recommendations, reducing confusion by introducing a standard of care, increasing patient safety.[28]

Another study noted that in Ontario between 1994 and 2005 approximately half of the coronary heart disease mortality reduction was associated with improvements in major risk factors and evidence-based treatments.[29]

One report estimated the direct and indirect annual costs of cardiovascular disease at $20.9 billion (2005 dollars), of which the direct annual costs related to hospitalizations were approximately $2.9 billion (14% of the total).[30]

Through the recommended C-CHANGE guidelines we can better manage cardiovascular disease, reduce hospitalizations, and make a difference by not only improving the quality of life for cardiovascular patients, but also reduce the cost of cardiovascular disease on the health system.

Diabetes

Like cardiovascular disease, diabetes is also considered a manageable chronic condition, that is defined as a "… sometimes fatal disease, characterized by elevated blood glucose which, if not managed properly, damages blood vessels, organs and nerves."[31] It is estimated some 2.7 million Canadians or 7.6 per cent of the population suffer from diabetes with a further one million undiagnosed cases. Approximately 7,500 Canadians die every year due to diabetes related complications. The prevalence of diabetes has almost doubled since 2000 and is expected to increase by another 1.5 million Canadians, or 10.7 per cent of the population, by 2020.[32]

The numbers suggest that diabetes takes a tremendous human toll. It was the primary cause of 34 per cent of all new cases of end-stage renal disease in 2009, and creating a growing demand for dialysis and kidney transplants. In 2006, it was estimated that close to 500,000 Canadians had some form of diabetic eye disease. Nearly 40 per cent of Canadian adults who reported having diabetes rated their health as "fair" or "poor." This contrasts with just 10 per cent of the adult population without diabetes who responded the same way. Individuals with diabetes are over three times more likely to be hospitalized with cardiovascular disease than those without and 20 times more likely to have non-traumatic lower limb amputations.[33]

Direct and Indirect Costs of Diabetes

Total cost to the health care system and economy is estimated at $11.7 billion annually, including $2.4 billion in direct health care costs and $9.2 billion in indirect costs such as lost earnings.

Source: Canadian Diabetes Association, Diabetes Quebec. *Diabetes: Canada at the Tipping Point, 2012*

A Leading Health Challenge for Diabetics: Foot Ulcers

Diabetes is a menacing disease that strikes the entire metabolic system, causing complications from head to toe, tending to strike the feet first with foot ulcers being a major cause of illness and death in people with diabetes. Many individuals with diabetes suffer from peripheral neuropathy, which can cause pain or numbness and may prevent people from noticing small wounds on their feet. If the wounds become infected, it can lead to gangrene and amputation. It also substantially increases health care costs – foot complications account for approximately 20 per cent of all diabetes-related hospital admissions in North America.[34]

In May 2012 the Canadian Diabetes Association (CDA) and the Canadian Association for Wound Care (CAWC) noted that:

- About 345,000 of the 2.7 million Canadians living with diabetes will develop a diabetic foot ulcer in their lifetime.
- Individuals with diabetes are 23 more times more likely to be hospitalized for a limb amputation than someone without diabetes.
- Diabetic foot ulcers cost our healthcare system more than $150 million annually.
- An estimated 85% of all leg amputations are the result of a non-healing foot ulcer.[35]

The CDA has also noted that research on best practices in prevention suggests that most diabetic foot ulcers and amputations can be prevented and that between 49% and 85% of amputations can be avoided through education, monitoring and early treatment.[36] The Registered Nurses' Association of Ontario (RNAO) *Guidelines for the Assessment and Management of Foot Ulcers for People with Diabetes* is about this type of preventive care. Full uptake of this guideline will make a real difference in helping to reduce the number of Canadians who suffer the physical and emotional trauma of an amputation.

Clinical Practice Guidelines: Recommendations for Implementation and Follow Up

The following recommendations look to continue the identification and dissemination of information on clinical practice guidelines:

1. **It is recommended that** Premiers direct Ministers to work with their clinical communities and health officials with the objective of adopting the following clinical practice guidelines:

C-CHANGE Guidelines for Cardiovascular Disease

Briefly, the C-Change Guidelines recommend the following:

- Harmonized guidelines for prevention
- Lifestyle risks (e.g. smoking; physical inactivity; obesity).
- Screening strategies (e.g. taking family history; measuring body mass index; annual evaluation for Type II diabetes; annual screening for hypertension).

Harmonized Guidelines for Diagnosis

- Laboratory testing (e.g. urinalysis, ECGs).
- Risk stratification strategies (e.g. family history; lifestyle/smoking; patients with diabetes).

Harmonized Guidelines for Treatment

- Establishing treatment targets (e.g. limiting alcohol consumption; healthy body weight; glycemic or blood sugar targets).
- Health behaviour interventions (e.g. balanced heart healthy diet; limiting salt intake; smoking cessation).
- Pharmacologic therapy (e.g. assessment of drug and drug interactions; tailoring to patient's level of risk and/or specific risk factor targets; co-existing conditions or morbidities).

Registered Nurses Association of Ontario (RNAO) Guidelines for the Assessment and Management of Foot Ulcers for People with Diabetes

Briefly, the RNAO guidelines recommend:

- To decrease the risk of foot lesions and amputations, foot examination should be performed at least annually, and more often for those at high risk.
- People at high risk should receive foot-care education, professionally fitted footwear, help to stop smoking, and early referrals to a health care professional if problems occur.
- Foot ulcers should be aggressively treated and managed by a multidisciplinary team expert in managing wounds to prevent recurrence and amputation.

2. **It is recommended that** Premiers direct Ministers to work with their respective clinical communities and health officials with the objective of developing within six months provincial and territorial-specific deployment strategies.
3. **It is recommended that** Premiers direct Ministers to report back to the Council of the Federation through the Health Care Innovation Working Group within twenty-four months with an update on progress on implementation.
4. **It is recommended that** Premiers encourage national health provider organizations to collaborate with their provincial and territorial provider organizations, where applicable, to promote the adoption of the recommended clinical practice guidelines.
5. **It is recommended that** Premiers direct Ministers to consult with their respective provider and patient groups to continue to identify other leading practices in clinical practice guidelines that could be shared amongst provinces and territories and to identify a proposal for sustaining this initiative going forward.

3.2 Team Based Models of Care

Team based models of care hold great potential as an enabler of improved patient care and will significantly help leaders meet health system demands. As an example, Ontario defines the term (what they refer to as inter-professional care) in the following way:

Inter-professional care is the provision of comprehensive health services to patients by multiple health caregivers who work collaboratively to deliver quality care within and across settings.

As part of the direction from the Council of the Federation, the Team Based Models Theme Group was to place priority on models focused on patient-centred, team based health services for rural and remote areas, seniors care, and those living with chronic diseases.[37] This focus is due to the fact that health care improvement outcomes linked to the implementation of clinical practice guidelines have predominately been achieved in team based case models.[38] Team based models also have additional benefits over the traditional model of care due to its collaborative approach that utilizes an inter-professional team that cares for the patient rather than requiring the patient to move from provider to provider within the system, which can result in disjointed care.

Patients and their families are rightfully demanding timely care that is seamless. Patients don't want a disjointed care experience where communication between health care providers is limited or non-existent. What they do want is a health care system that places people at the centre – a system that operates seamlessly across professional and organizational boundaries for their benefit.

A Balanced Approach

Team based models of care:

Have been shown to lead to better health outcomes for people with chronic disease;

Have been shown to lead to better care through increased access to healthcare and improved patient experience; and

Have been shown to lead to better value through better use of clinical resources.

Source: *Inter-professional Care: A Blueprint for Action in Ontario.* HealthForceOntario; 2007.

At the outset, the theme group acknowledged a lack of coordination among health care services and the underutilization of collaborative, inter-professional care.[39] Their goal was to find team based models that achieve true collaboration and allow all team members to work to their maximum scope of practice.

In undertaking their work, the theme group developed a series of criteria for assessing models of care. In particular, potential models were required to:

- Address a specific health care problem (e.g. access, quality, lack of integration);
- Not be designed to replace any health provider group;
- Based upon inter-professional teams that utilize providers to their full scope of practice;
- Demonstrate collaboration, not competition, amongst providers;
- Be easy to implement;
- Be transferable and deployable; and
- Use evidence to demonstrate impact.

The Team Based Models Theme Group reached out to many different sources to identify leading practices (Provinces and Territories, the CMA, the CNA, the Health Action Lobby). In the end sixty-eight models were assessed based upon the principles and criteria; the most promising of which are outlined below.[40] Of those identified, further work was done to identify core attributes and key success factors.

Focus: Access to Emergency Health Services in Rural Areas

Collaborative Emergency Centres in Nova Scotia

A Collaborative Emergency Centre (CEC) is designed to enhance access to high quality comprehensive primary care that is capable of dealing with unexpected illness or injury in a timely fashion. Nova Scotia has been implementing this model in communities where maintaining 24-7 emergency service is difficult.

A CEC has three essential components that are formally linked:

- A primary care team;
- Urgent care capacity; and
- A protocol for emergency care in collaboration with emergency health services.

A CEC is open twenty fours hours a day, seven days a week and is staffed by two health care teams. During the day, CECs are staffed by

teams that may include physicians, nurses, nurse practitioners, and others providers as the need is identified. During the night, the team includes a nurse and paramedic with physician oversight through the emergency health system. This approach allows each provider on the team to work to their optimal scope of practice within inter-professional teams to meet the health needs of the local community.

What are the Benefits?

Access has improved:

Primary care is available evenings and weekends;

Waiting lists for primary care have been eliminated and patients have access to same or next day appointments;

Visits to emergency rooms for primary care have dropped significantly;

Patients are satisfied with access to the service and care received in the CEC model.

Source: Nova Scotia Ministry of Health

Focus: Access to Enhanced Homecare

Virtual Ward: Manitoba

A virtual ward delivers hospital-type services in the community. Manitoba introduced its model in 2011 to provide team based home care to patients with chronic disease. The model is intended to reduce hospital and emergency room use by providing patients with increased access to multidisciplinary health teams in their homes. The core staff includes: a nurse coordinator, a physician, a care coordinator, a nurse practitioner, a community mental health coordinator, and administrative support. The team can draw on other health professionals in the region including pharmacists, occupational therapists, physiotherapists, respiratory therapists, speech language pathologists, and social workers.

Virtual Ward Acute Home-Based Treatment: British Columbia

British Columbia established virtual wards in multiple locations to offer short-term psychiatric care for patients in their own homes as an alternative to hospitalization. The model seeks to deliver care that supports patients and their families with minimum disruption to their lives. The staff team, including a psychiatrist, nurses, social workers/counsellors, and rehabilitation professionals, works collaboratively with patients and their families. The focus is on intensive, short-term treatment with one to three home visits per day over 21 days. The team provides medications, monitors and stabilizes acute symptoms, develops care plans, educates the patient and family, takes the patient to physician appointments and ensures links are there to help patients make the transition to community supports such as their family physician and outpatient mental health and addiction clinics.

What are the Benefits?

Among heavy hospital users the following results were achieved:

Emergency room visits decreased from 64 to 27;

Hospital admissions decreased from 25 to 10 one year to the next; and

The number of hospital bed days dropped from 319 to 138.

Source: Manitoba Health

Extra-Mural Program: New Brunswick

New Brunswick's Extra-Mural program is an innovative example of how patients can use technology to participate in their own care by using telephone-based technology to monitor their own vital signs and share the results with clinicians. Patient education is a key part of the program and the regular monitoring of their own vital signs helps empower them to assume greater responsibility for their own care.

What are the Benefits?

When the program was piloted in a rural area, it resulted in an 85-per-cent reduction in hospital admissions and a 55-per-cent decrease in emergency visits.

Source: New Brunswick Health

Focus:
Access to Primary Care

It has become increasingly clear over the past decades that a strong primary care system is essential to ensuring better health outcomes for a population.[41] Primary care practitioners are often a patient's first contact point with the health system, and can 'reduce unnecessary costs and the need for specialty care through improving the quality of prevention, coordination and continuity of care.'

The theme group recognized that all jurisdictions have implemented their own primary care models and it is not a matter of simply replacing one model with another. In identifying models that address theme group priorities outlined by the Council of the Federation, the leading practices identified contain elements we believe can be incorporated into the current primary care approaches of provincial and territorial jurisdictions in support of these specific health care objectives.

'Canadians have problems accessing primary health care services. While most Canadians can identify a family physician from whom they would seek care, Canada performs poorly with regards to all other indicators of accessibility. Canadians have inadequate after hours access, have difficulty getting an appointment when needed and make inappropriate use of emergency room visits…

Poor accessibility in the primary health care system has a significant impact on the overall healthcare system efficiency and sustainability, and on patient outcome.'

Source: The Economic Impact of Improvements in Primary Healthcare Performance. 2012. The Canadian Health Services Research Foundation. Pg. 10

Example:

Chinook Primary Care Network - Taber Clinic, Alberta

Alberta's Taber Clinic has introduced a team based primary health model. They credit their success in chronic disease prevention and management on a number of factors, but two in particular have the potential to be replicated. The first is Alberta's Access, Improvement, Measures (AIM) Program. AIM is a quality improvement initiative that uses a set of principles and a proven process that reduces wait times for appointments and improves how patient care is managed, which in turn leads to improved quality outcomes. The second is using Alberta's Validated Patient Lists. With these lists, the Taber Clinic could create registries to monitor chronic disease among their patients and do a better job of planning the mix of health professionals they needed. The lists also helped them increase screening and health promotion initiatives.

What are the benefits?

Results to date have been impressive. For example the hospital in Taber saw asthma visits drop from 400 in 2009 to 19 in 2011.

Source: Alberta Health

Example:

Family Health Team Clinic, St. Michael's Hospital, Ontario

The Family Health Team Clinic at St. Michael's Hospital mixes a broad range of health providers in collaborative practice; their goal is to provide services that will enhance patients' overall functioning and quality of life. The team includes physicians, nurses, nurse practitioners, chiropractors, psychologists, social workers, dieticians, pharmacists, dentists and dental hygienists. The team puts strong focus on patient self-management of chronic disease with initiatives such as smoking cessation clinics, diabetes nutrition programs, mindfulness medication groups, and technology-based education.

St. Michael's is one of 200 Family Health Teams in Ontario, which provide interdisciplinary primary care access to 2.8 million Ontarians (over 600,000 of which were previously unattached) and delivery of a range of programs to meet community needs in the areas of health promotion, disease prevention and chronic disease management.

Example:

Modèle des Groupes de médecine familiale, Québec

Groupes de médecine de famille are team-based primary care models that include physicians, nurses, pharmacists, nutritionists, physiotherapists and others, operating out of Quebec's integrated health and social service centres (CLSCs). The groups focus on preventing and managing chronic disease, including diabetes, asthma, chronic obstructive pulmonary disease (COPD), arthritis, and hypertension.

Example:

Long and Brier Islands Paramedicine Program, Nova Scotia

Long and Brier Islands, off the coast of Nova Scotia, had a combined population of about 1,200 people and had been without a family doctor for many years when the Community Paramedicine program was introduced in 2001. The model is collaborative: advanced-care paramedics work with a local nurse practitioner and an off-island family physician. The program was designed to make better use of the paramedics who were stationed on the islands full-time, but only responded to one emergency call every three days. After upgrading their training, the paramedics began to assess and manage simple wounds, administer flu immunizations, and perform basic homecare services.[42]

What are the benefits?

The Long and Brier Islands' Para-medicine program was systematically reviewed in a three-year study by researchers at Dalhousie University. They found the innovative model:

Decreased cost, high level of acceptance and satisfaction, and effective collaboration among care providers.

Increased health promotion, including smoking cessation, weight loss, and seniors' fitness.

Increased access to illness and injury prevention services, including various screening programs and better access to treatment for both common acute illnesses and injuries and chronic disease.

Conclusion: Para-medicine initiative "increases access to health care services and is a cost-effective model of health care for rural communities with low emergency call volumes."

Source: Nova Scotia Ministry of Health

Team Based Models: Recommendations for Implementation and Follow Up

The following recommendations seek to continue the identification and dissemination of information on team-based models of care.

6. **It is recommended that** Premiers direct Ministers looking to address the challenges of providing emergency services in rural areas to consider adapting the elements and key success factors of Nova Scotia's Collaborative Emergency Centre model that best address respective jurisdictional needs.

   It is recommended that Premiers direct Ministers looking for innovations in enhanced, team-based, homecare services to consider adapting the elements and key success factors of virtual ward models, from either Manitoba or British Columbia or New Brunswick's Extra-Mural program that best address respective jurisdictional needs.

   It is recommended that Premiers direct Ministers looking for innovations in chronic disease prevention and management and in improving access in rural and remote areas to primary care to consider adapting the elements and key success factors of the team-based models from Alberta, Ontario, Québec, and Nova Scotia that best address respective jurisdictional needs.

7. **It is recommended that** Premiers direct the Health Care Innovation Working Group to define options for a platform for ensuring the ongoing identification and dissemination of information on innovative models in order to help promote the adoption of leading practices.

3.3 Health Human Resources Management

Health Human Resource Planning: Improving Access and Sustainability

Our ability to provide Canadians with the best care possible is dependant on how effectively we manage our health human resources. For example, team-based models of care that address our theme issues will only succeed if there is an appropriately trained supply of health-care providers. Better health, better care, and better value are dependant on better teams. However, the health human resource theme group found that the current supply side approach to health human resource planning has potentially undermined the goal of providing an accessible, sustainable health care system and current methods have contributed to increased competition and increased costs.

Traditionally, health human resource planning has been tackled separately by each jurisdiction rather than on a broader provincial-territorial basis. A more coordinated and collaborative strategy between jurisdictions is required as the traditional approach has resulted in a number of problems as the Advisory Committee on Health Delivery and Human Resources noted in its paper *A Framework for Collaborative Pan-Canadian Health Human Resource Planning:*

> *"The status quo approach to planning has the potential to create both financial and political risks, to limit each jurisdiction's ability to develop effective sustainable health delivery systems and the health human resources to support those systems, and to fall short of the Canadian Public's expectations…of a seamless system from province to province."* [43]

What are the benefits?

Approximately 70% of health care costs are attributed to human resources. Better managing our resources ensures future sustainability of our health care system

Source: *Health Care Drivers:* the Facts, Canadian Institute for Health Information, Oct. 2011

In order to both mitigate these risks, and provide excellence in service to our citizens, we need to embrace an integrated, needs-based approach for the planning and deployment of health human resources and work together to reduce unsustainable competition nationally for health professionals.

It will be important going forward that the proposed strategies on health human resources involve a coordinated and collaborative approach by the Ministries of Health and those Ministries responsible for Advanced and Post-Secondary Education. It would also require the input from those organizations that have responsibility for planning and delivering health services, for example regional health authorities.

A Starting Point: Guiding Principles for Health Human Resource Management

The working group developed several guiding principles (see recommendation eight) to focus provincial and territorial efforts in health human resource management. The principles focus on a number of strategic considerations and options for action between jurisdictions. Endorsement of these standards will improve both the accessibility and sustainability of the health care system.

Enhanced Health Human Resource Training and Information Sharing

In addition to these guiding principles, the Working Group identified the importance of a better coordination of health professional training programs. Most jurisdictions employ specialized health occupations such as radiation therapists and cardiac perfusionists, but the supply of graduates is limited to only a handful of programs in a few jurisdictions.[44] Provinces and territories addressing these shortcomings will increase accessibility to services and further align supply with demand for these specialties, addressing the issue of national competition for health care professionals.

The ability for improved information exchange amongst provinces and territories on health human resources topics was seen as a priority to allow for more informed decision making. Topics such as supply and demand statistics, information on career opportunities, and career paths for health professionals are among those areas where a more concerted effort to share factual, up to date information would be beneficial. The development of a website is one possible approach to share information on health human resources. Related to this work, the sharing of human resource forecasting tools and frameworks will also be an important factor to anticipate supply, link demand with population needs, and ensure the most accurate information is shared between partners.

Future work in the area of health human resource management includes examining health human resource funding and payment systems. The health human resource group has identified further opportunities to improve the sustainability of health systems by aligning advances in technology and productivity with appropriate funding and payment practices.

The following recommendations seek to continue the identification and dissemination of information on Health Human Resource Management:

8. **It is recommended that** Premiers endorse the following G*uiding Principles for Health Human Resource Management:*

    a) **Share Evidence:** Provinces and territories should share health human resource labour market information to support effective decision-making.

    b) **Seek Innovation:** Provinces and territories should share leading practices and work closely together on innovative approaches to managing labour costs and reducing competition.

    c) **Respect Interdependence:** Provinces and territories should recognize that health human resource management decisions made by individual jurisdictions may have an impact on other jurisdictions.

    d) **Make Informed Decisions:** Provinces and territories should explore and act on areas of mutual interest and common approaches to health human resource management.

    e) **Integrate Planning:** Provinces and territories should work together to strive for an appropriate supply of health human resources at the provincial and national levels.

9. **It is recommended that** Premiers direct the Ministers to work together, on a voluntary basis, on creating a health human resource website to facilitate better communication of information about health human resources labour markets across provinces and territories.

10. **It is recommended that** Premiers direct Ministers to undertake, on a voluntary basis, the following health human resource initiatives and report back to the Council of the Federation on progress:

    a) **Shared workforce projections:** Work with faculties of health sciences, nursing, and medicine and regulated health service providers to adapt and apply leading practices in needs-based planning, and work together across the health professions to assess changing health needs against current and projected work force supply across jurisdictions. This joint work would leverage several models including: Ontario Population Needs-Based Physician Simulation Model, the Magnetic Resonance Imaging (MRI) Technologist Simulation Model and other existing models across Canada.

    b) **Shared data sets and analysis:** Create and maintain a core data base that would permit jurisdictions to share comparable qualitative and quantitative data sets such: as vacancy rates and/or job-posting numbers; legislative initiatives; utilization and productivity pilot projects; rural recruitment and retention strategies; common definitions of key demand and supply metrics.

    c) **Sharing Training Capacity:** Analyse training capacity across jurisdictions for all health professionals, in relation to current and projected health care needs, taking into account the adoption of innovative delivery models across jurisdictions and acknowledging the need to share funding to provide high-quality training for “low-critical-mass” programs.

The Working Group identified two possible areas that would benefit from provincial and territorial cooperation. The first area of improvement provides an opportunity to reduce generic drugs costs. A second area of focus is the application of Lean (continuous improvement) methodology to the health system in order to improve patient outcomes. These initiatives are described in greater detail below and represent priorities the Health Care Innovation Working Group is recommending for future action.

4.0 Emerging Themes

4.1 Value Price Initiative on Generic Drugs

On August 6, 2010, the Premiers agreed to establish a provincial-territorial purchasing alliance to consolidate public sector procurement of common drugs, medical supplies, and equipment. The Alliance is intended to capitalize on the combined purchasing power of public drug plans in multiple jurisdictions leading to increased access to drug treatment options, lower drug costs, and greater consistency of listing decisions across participating jurisdictions.

Through this initiative, patient accessibility to drugs has been improved and the provinces and territories have saved millions of dollars that have been reinvested into health programs. To date, the provincial-territorial approach has only applied to brand name single source drugs. Next steps on our pharmaceutical procurement strategy include two initiatives: accelerate the Pan-Canadian Purchasing Alliance work on brand name drugs; and, establish a new competitive value price initiative to obtain better prices for generics. As provinces and territories work more closely on joint procurement strategies, there will need to be an adequate understanding and consideration of both the diversity of the supply chain, and the issue of safety and quality in the supply chain.

With strong leadership and support from provinces and territories, we can work toward adopting a national competitive bidding process. More internationally comparable prices may be achieved not only benefiting the public sector, but it may also result in savings for the private sector and employer sponsored insurance, as well as cost savings for Canadians who pay for drugs out of pocket. Over the long term there may also be opportunities for Ministries of Health and Industry, along with industry partners, to work collaboratively on the issue of supply.

What are the benefits?

Achieving internationally observed prices for the top 10 generic drugs could result in $30 million in savings annually in British Columbia alone

Source: B.C. Ministry of Health

Careful consideration will need to be given to identifying potential products, establishing criteria, and finally implementing a national competitive bidding process in order to mitigate potential risks. However, the benefits of reducing prices for generic drugs through a provincial-territorial approach are great; allowing us to move towards equitable and consistent pricing for all Canadians.

The following recommendation seeks to build on the existing pan-Canadian purchasing alliance on brand name drugs by establishing an initiative related to generics:

11. **It is recommended that** Premiers direct Ministers to undertake the following with respect to generic drugs:

    a) Identify three to five generic drugs to include in a provincial/territorial Competitive Value Price Initiative that would result in better prices for generic drugs.

    b) Initiate a national competitive bidding process by Fall 2012 that would result in lower prices taking effect by April 1, 2013.

4.2 Continuous Improvement in Health Care

If Lean (continuous improvement) could be defined in one sentence the 'optimization of value from the perspective of patients and families while containing costs' would be a good place to start. There is a fiscal and ethical responsibility to provide taxpayers with the best possible value for their tax dollars. The application of Lean (continuous improvement) methodology to health care reflects a patient-centred approach that offers the opportunity to achieve better health, better care, and better value for patients.

Lean promotes the evaluation, uptake, and dissemination of leading practices to ensure patients receive safe, high quality care allowing for best possible health outcomes.

What are the benefits?

Through the elimination of waste, Lean redirects time and energy to sustain and often enhance programs and services.

Source: Saskatchewan Ministry of Health

Furthermore, Lean enables continuous improvement by putting problem solving into the hands of those who do the work and encouraging teams to work together in a collaborative way to find solutions. Engaging patients / staff / providers in system improvement takes into account the patient experience in the health system, while also tapping into the expertise of frontline staff who complete the work; providing better care for patients and increasing morale.[45]

Consideration could be given to creating a platform for sharing information amongst provinces and territories on the various Lean initiatives underway.

The Working Group believes the areas identified through the recommendations and areas for future action section offer meaningful opportunities to provide improved health care for Canadians. However, the extent to which our respective health systems are able to fully embrace the recommendations outlined in this paper will depend on our capacity to manage change and evaluate progress.

Provincial and Territorial Examples:

Reduction of 65 per cent in time from court referral to admission in the Forensic Psychiatric Commission (British Columbia).

Reduction of 65 per cent in patient transfer time and stretcher days available in the Grey Nuns Community Hospital Emergency Department and an increase in the number of patients seen in less time (Alberta).

Improvement of 17 per cent improvement in discard rate for units of red blood cells used by Regional Health Authorities resulting in $10 million in annual savings (Saskatchewan).

Pursuing Excellence website/repository of tools established for dissemination of leading practices (Manitoba).

Improvement in coordination, consistency, and clinically appropriate use of non ambulance patient transport, therapeutic surfaces, and negative pressure wound therapy through the establishment of a centralized call centre and standardized ordering processes at Hamilton Health Sciences (Ontario).

Implementation of a LEAN Healthcare six sigma global approach in three Québec health institutions, i.e. Centre hospitalier universitaire de Québec – Hôpital Saint-François d'Assise, Sud-Ouest Health and Social Services Centre – Verdun and Jardins-Roussillon Health and Social Services Centre. Review in each of these institutions of ten key processes identified by the personnel, managers and physicians directly involved and according to criteria based on the clients' needs. (Quebec).

Increase in nurse productivity as a result of the streamlining of process for ordering supplies within a unit, allowing more focus on patient-related activities (New Brunswick).

Reduction in intake time for patients at the Prince Country Hospital's Ambulatory detox through the development and implementation of a standardized nursing checklist (Prince Edward Island).

Reduction in emergency department wait-times resulting from patient flow and process improvements (Nova Scotia).

Reduction in wait times for results of prostrate biopsies from 18 to 2 business days with no increase in staff (Newfoundland and Labrador).

5.0 Innovation to Action: Deployment, Measurement & Evaluation

5.1 Readiness for Change: Change Management

The theme groups focused on the capacity of our health systems to embrace the recommendations identified by the Health Care Innovation Working Group. The group identified four preconditions of success to support the large-scale change required to translate the recommendations of this report into action.[46] These include:

- **Present Leadership:** successful innovations are led by people who provide clear vision, champion the change, and create safe environments conducive to supporting an empowered and involved workforce.
- **System Alignment:** strategies must be consistent across each provincial-territorial health system.
- **Whole System Involvement:** putting policy deployment in place with goal setting that gets cascaded to frontline staff and back up through to leadership in each jurisdiction.
- **Flexible Organizational Structures:** that allow for system-wide support to implement change, monitor compliance, and evaluate/ sustain results in each jurisdiction.

5.2 Measurement and Evaluation

As with supporting change management practices, measurement and evaluation will be important to gauge our success as we both deploy initiatives to support the recommendations and plan for future areas of improvement. Measurement and evaluation will be essential in monitoring whether we are achieving our goals, allowing us the flexibility as we proceed to adjust our approach and further improve the health care system.

In terms of measurement, we will not know where we are going until we know where we have been. Measurement is important in order to support system behaviours alignment with results. Measuring / tracking trends for a variety of measures including quality, cost, productivity, etc. will be crucial to ensure we are meeting the goals outlined in the recommendations while subsequently meeting our overall goal of improving the patient experience across the entire health care spectrum.

For the evaluation component, the theme groups identified the "CASIL" reporting system developed by the National Health Service Institute for Innovation and Improvement as a useful framework.[47] The framework focuses on five key areas:

- **Completion:** has the Health Care Innovation Working Group delivered on the mandate extended to it by the Council of the Federation?
- **Adoption/Awareness Activities:** uptake and organizational awareness of the recommendations outlined through this report.
- **Spread:** uptake of the initiative across jurisdictions.
- **Impact:** measured through evaluation, based on the established objectives.
- **Lessons Learned:** sharing what worked and what would work better moving forward.

The evaluation process will establish common measures for success and create benchmarks for measuring progress. Following deployment, the evaluation will take a more focused approach considering the impacts of the initiative as a whole as well as system uptake, involvement, and sustainability of the recommendations.

12. **It is recommended that** Premiers direct the Health Care Innovation Working Group to monitor the progress on the initiatives contained in From Innovation to Action in Health Care.

All provinces and territories contributed to the work of the Health Care Innovation Working Group and share the goals underlying the present report. Provinces and territories intend to implement the measures and recommendations outlined in the report as they deem appropriate to their health care system. All Provinces and territories will continue to share information and best practices with one another.

6.0 Moving Forward: Improving Patient Care

The progress of the Health Care Innovation Working Group displays how provinces and territories can effectively work with health providers and other stakeholders to undertake initiatives for improving health care. Recommendations will be implemented that have been shown to improve chronic disease prevention and management, seniors' care, and delivery of emergency and primary care in rural settings, allowing us to better manage our health human resources.

This collective effort identified meaningful ways to improve patient care while supporting a sustainable health care system based on safe, quality, and timely services. The adoption of new models of care and improved clinical practices noted in this report will not only improve quality and appropriateness of treatment, but will do so in a manner that is sustainable.

In completing this work, we recognize there are other areas that require our collective effort. Establishing a new competitive value price initiative for generic drugs and the adoption of Lean principles in our health care systems are two possible priority areas identified for further cooperation and collaboration.

As well as highlighting the importance of the initiatives themselves; this report also touched on the importance of ensuring transparency and accountability in achieving the results outlined in the recommendations.

Measurement and evaluation will allow us to monitor progress and the Council of the Federation commits to reporting regularly on progress of these initiatives to Canadians.

Most importantly, we are undertaking this work with one overarching goal: to significantly improve patient care and overall system performance. It is our hope that the initiatives outlined in this report meaningfully contribute towards the shared goal of providing Canadians with access to the best health care in the world. Canadians expect and deserve no less.

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[1] This is not the first time that jurisdictions have come together to tackle common health challenges. Since the creation of the Council of the Federation in July 2003, there have been numerous health-related joint efforts, including: National Pharmaceuticals Program (2004); Advisory Panel on Fiscal Imbalance (2006); Agreement on Internal Trade (July 2009); Quality Health care (August 2010); Pan-Canadian Purchasing Alliance (August 2010); Children and Families (July 2011); Mental Health Summit (February 2012; and, in conjunction with Working Group on Health care Innovation, Working Group of Fiscal Arrangements (January 2012).

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[8] In keeping with the spirit of the manner in which the Council of the Federation functions, decision-making was on a consensus basis. Representatives of the CMA and CNA were full participants in the consensus-building process from the outset in terms of both the clinical practice guidelines and team-based models theme groups. Their clinical expertise and insights were invaluable to delivering a report within the 100-day window. This included efforts to ensure that their provincial/territorial bodies were kept apprised along the way.

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Appendix A: Health Care Innovation Working Group

Premier Co-Chairs

Premier Robert Ghiz, Prince Edward Island
Premier Brad Wall, Saskatchewan

Health Ministers

Honourable Michael de Jong, British Columbia
Honourable Fred Horne, Alberta
Honourable Dustin Duncan, Saskatchewan
Honourable Randy Weekes, Saskatchewan
Honourable Theresa Oswald, Manitoba
Honourable Deb Matthews, Ontario
Honourable Dr. Yves Bolduc, Quebec
Honourable Madeleine Dubé, New Brunswick
Honourable David A. Wilson, Nova Scotia
Honourable Doug Currie, Prince Edward Island
Honourable Susan Sullivan, Newfoundland & Labrador
Honourable Doug Graham, Yukon
Honourable Tom Beaulieu, Northwest Territories
Honourable Keith Peterson, Nunavut

Deputy Minister Co-Leads

Michael Mayne, Prince Edward Island Department of Health and Wellness
Dan Florizone, Saskatchewan Ministry of Health

Team Based Models-Scope of Practice Theme Group

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Lyne St. Pierre- Ellis, New Brunswick Health (co-lead)
Geof Langen, Manitoba Health
Trish Fanjoy, New Brunswick Health
Martin Vogel, Canadian Medical Association
Todd Watkins, Canadian Medical Association
Millicent Toombs, Canadian Medical Association
Robert Boulay, New Brunswick Medical Society
Dan MacCarthy, British Columbia Medical Association
June Webber, Canadian Nurses Association
Josette Roussel, Canadian Nurses Association
Christine Rieck Buckley, Canadian Nurses Association
Donna Denney, College of Registered Nurses of Nova Scotia
Sue VanDeVelde-Coke, Association of Canadian Executive Nurses

Clinical Practice Guideline Theme Group

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Susan Williams, Alberta Health (co-Lead)
Lynn Olenek, Alberta Health
Monique Gervais Timmer, Alberta Health
Louis Dimitracopoulos, Ontario Ministry of Health and Long-term Care
Doris Grinspun, Registered Nurses' Association of Ontario
June Webber, Canadian Nursing Association
Lisa Ashley, Canadian Nursing Association
Martin Vogel, Canadian Medical Association
William Hnydyk, Alberta Medical Association
Sam Shortt, Canadian Medical Association
Adele Fifield, Canadian Association of Radiologists

Health Human Resource Theme Group

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Bruce Cooper, Newfoundland and Labrador Ministry of Health (co-lead)
Mariana Diacu, British Columbia Ministry of Health
Wendy Trotter, British Columbia Ministry of Health
Gayle Downey, British Columbia Ministry of Health
Michael Kary, British Columbia Ministry of Health
Leann Cairns, British Columbia Ministry of Health
Patrick Anderson, British Columbia Ministry of Health
Rosemary Boyd, Newfoundland and Labrador Ministry of Health
Libby Posgate, British Columbia Ministry of Health
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Heather Hanrahan, Newfoundland and Labrador Ministry of Health
Kathy Rodway, Newfoundland and Labrador Ministry of Health
Andrew Wells, Newfoundland and Labrador Ministry of Health

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